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ABSTRACT

Structural covariance models that would explain the correlations observed among mathematics achievement and participation measures and related cognitive and affective variables were developed. A sample of college calculus students (N=268; 124 females and 144 males) was administered a battery of cognitive tests (including measures of spatial-visual ability and field dependence/independence) and a battery of affective scales (including measures of attitude toward mathematics, confidence, perceived usefulness of mathematics, and effectance motivation). Measures of previous academic achievement and participation in mathematics and science, and achievement in the calculus course itself were recorded. The sample was then split into two subsamples. Using one subsample, a test of the hypothesis that males and females have the same covariance structure for the measures was performed. A significant difference was found (p less than .0001). Separate structural models were developed for males and females based on the sample correlations from this subsample. The second subsample was used to evaluate the adequacy of the developed models by application of factorial modeling, a confirmatory tool for such models. There was evidence of a reasonable fit for both models. Directions for further research with the aim of improving the model is discussed. Extensive statistical tables are appended. (Author/JN)

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An Investigation of Calculus Learning Using Factorial Modeling

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Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, April 24, 1984.

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Abstract

The purpose of this study was to develop structural covariance models that would explain the correlations observed among mathematics achievement and participation measures and related cognitive and affective variables. A sample of college calculus students (N = 268) was administered a battery of cognitive tests, including measures of spatial-visual ability and field independence/field dependence, and a battery of affective scales, including measures of attitude toward mathematics, confidence, perceived usefulness of mathematics, and effectance motivation. Measures of previous academic achievement and participation in mathematics and science, as well as achievement in the calculus course itself were recorded. The sample was then split into two subsamples. Using one subsample, a test of the hypothesis that males and females have the same covariance structure for the measures was performed. A significant difference ($p < .0001$) was found. Separate structural models were developed for males and females based on the sample correlations from this subsample. The second subsample was used to evaluate the adequacy of the developed models by application of Factorial Modeling, a confirmatory tool for such models. There was evidence of a reasonable fit for both models. Directions for further research with the aim of improving the models is discussed.

Background

Many factors have been suggested as being related to mathematics achievement and participation. Several cognitive and affective variables have been the focus of research aimed at better understanding individual differences and sex differences in the learning of mathematics (Fennema & Behr, 1980; Fennema, 1977). Such research has relevance to the mathematics educator both in terms of predicting future mathematics achievement and deciding how best to intervene in improving mathematics learning and participation.

The cognitive variables which have received the most attention are spatial abilities and the cognitive style of field independence/field dependence. In the affective domain, confidence in learning mathematics, perceived usefulness of mathematics, effectance motivation, and the stereotyping of mathematics as a male domain have been studied as variables which might account for sex differences in mathematics achievement and participation (Fennema, 1977).

The effects these variables have in determining academic choices, especially towards pursuing scientific or technically oriented careers, has been of concern not only to the mathematics education community, but also to researchers studying the intellectual and career development of women (Meece, et al. 1982). Indeed, some have referred to mathematics as a "critical filter" which prevents many students from pursuing and/or attaining certain career goals (Casserly & Rock, 1980; Sells, 1976). In general, women elect to take fewer mathematics courses than men, and hence women are underrepresented in those careers which make the most use of mathematics.

College calculus students form a particularly interesting population in this regard, since these students still have the fullest range of scientific and technical careers open to them. Even among these students we see disproportionately fewer women pursuing such careers. For example, at the University of New

Hampshire, nearly 45% of the 1200 students who enrolled in freshman calculus during the fall 1983 semester were women. However, of these women, only about 25% were enrolled in the College of Engineering and Physical Sciences. In comparison, approximately 50% of the male calculus students were enrolled in the College of Engineering and Physical Sciences.

Almost certainly no single variable can account for all the sex differences observed in mathematics achievement and participation. It is much more likely that there is a complex interplay among mathematics achievement, academic participation and the related cognitive and affective variables. But it is difficult to find studies which have considered all of these variables with the goal of explaining the underlying structure of the relationships observed among them. It was this goal that prompted the present study.

Covariance structural models hold great promise for explanatory observational studies such as the present one. By identifying the sources of the covariances among the set of relevant variables and their relative contributions to accounting for the covariances, one can highlight sources of sex differences that other studies could not detect. The development of covariance structural models for males and females in college calculus was the primary objective of this study.

PURPOSE OF STUDY

The principal goal of the present study was to gain a better understanding of the structure of sex differences in mathematics achievement and participation through the development of covariance structural models. Of particular interest in this study were the contributions cognitive and affective variables related to mathematics achievement and participation make in explaining any sex differences. When one has gathered sample measurements of these variables as well as sample

measurements of mathematics achievement and participation, there are two natural types of statistics to consider when comparing males and females:

1) statistics of location

In other words, how do the sample mean vectors differ? Along what dimension is this difference most pronounced?

2) statistics of dispersion

How are the sample measurement vectors scattered about their respective means? What are the underlying sources of the observed variances and covariances?

Indeed, if it is reasonable to assume that our measured variables enjoy a multivariate normal distribution, then means, variances and covariances are precisely the sample statistics on which we should focus our attention.

We concentrated on the statistics of dispersion, the covariances and variances, in the present study.

The specific objectives of this study were to answer the following questions:

* Are the covariance structures of the measured variables related to mathematics achievement and participation different for males and females?

If the covariance structures are not different, then we next try to answer:

* How do the means of the measured variable differ for males and females, and

* What is the common covariance structure in terms of a covariance structural model?

If the covariance structures are different, we want to find

* How are differences in covariance structures reflected in terms of differences between the covariance structural models developed for males and females?

METHOD

Subjects and the Calculus Program at UNH

A random sample of students (N = 268; 124 females and 144 males) was selected from the standard first-semester calculus class at the University of New Hampshire. This sample of students was administered various and multiple measures of the cognitive variables of spatial ability and field independence/field dependence. All students in the class, including this sample, were administered measures of affective variables such as attitudes toward mathematics. In addition all students filled out extensive background questionnaires reporting their previous participation in high school mathematics and science, quantitative SAT scores, and academic major. Finally, quantitative SAT scores, and academic major. Finally, the achievement measures represented by the unit and final exams in the calculus course itself were recorded for the special sample.

Subjects for the study were drawn from the first-semester calculus course at the University of New Hampshire (UNH) during the fall of the academic year 1983-84. UNH is a state school with a total enrollment of approximately 10,000. Approximately 1200 students enrolled in the course. Of these, approximately 45% were female. All were required to have completed three years of college preparatory mathematics including trigonometry. Every student in the College of Engineering and Physical Sciences is required to take calculus and almost every college and department at UNH is represented. The 268 students selected for the sample receiving the additional cognitive measures were chosen randomly using the last digit of their student identification numbers.

The first-semester calculus course at UNH is taught using a modified version of the Keller plan of personalized instruction. There are six large lecture sections from which the students may choose to attend. Students can choose to switch lecture sections without notice and can even attend several

lectures in the same day. In addition, a tutorial room staffed by mathematics graduate students is open 30 hours a week for informal help sessions. Four days a week there are afternoon and evening problem sessions where solutions of selected homework exercises are presented.

The material covered in the course represents a standard course in differential and integral calculus. Swokowski's Calculus with Analytic Geometry is used as a text with Chapters 1-8 being covered in the first semester. The topics covered include the basic material on differentiation and integration of algebraic, exponential and logarithmic functions with applications.

At the beginning of the semester an algebra and trigonometry pretest is administered to all students. It is used to determine which students need to review some precalculus mathematics. If a need for review is indicated for an individual student, then he/she is required to make use of the individualized review materials at the UNH Mathematics Center and complete a review program specific to his/her needs by certain deadlines during the semester. The Mathematics Center is also available to anyone desiring review in algebra or trigonometry, or extra work on calculus materials.

Testing over the material covered in the calculus course is handled through a testing center. Each student enrolls in a testing laboratory as part of the course. This "lab" time consists of a weekly two-hour time block assigned to the student for testing-taking during the semester. During the first two weeks of the semester, the student's lab is reserved for administration of pretests. For the remainder of the semester, the lab time is used for the unit exams for the calculus course.

The two-hour time period which makes up a student's lab time is partitioned into two parts. The first hour the student is administered the exam. During the second hour the student has his/her exam graded while he/she observes. The

student's mistakes are reviewed and discussed by the grader at this time. Because the grading process rarely takes the full second hour, this time can also be used to get feedback information which might be of interest in planning any course revisions for the future. In this way the administrators of the calculus course at UNH have been able to conduct an ongoing evaluation of the program over the years. For the purposes of the present study, this time was available to administer the additional cognitive and affective measures. Because of the history of the calculus program at UNH, the students saw these measures as a natural part of the course evaluation process. For this reason, the administration of additional cognitive and affective measurement instruments was accomplished with little intrusion to the normal course routine, and we were able to gather multiple unobstrusive measures of these variables.

Procedure

The sample of students selected for this study was split into two subsamples using stratified random sampling with respect to sex. Each subsample consisted of 62 females and 72 males. One subsample was designated for exploratory purposes. This sample was used to test the hypothesis that the variance-covariance matrices for the chosen measures were identical for males and females.

If this hypothesis was accepted, then the underlying assumptions for a discriminant analysis would be met, and we could proceed to investigate differences in the means of the measures for males and females. If such an analysis further indicated that there were no significant differences in the means, then we could simply pool the two groups (subsample size of 134) and develop a single covariance structural model to explain the common structure of covariances for males and females. If the discriminant analysis indicated that there were significant differences in the means, then we could still develop a single co-

variance model based on the pooled variance-covariance matrix for males and females.

If the hypothesis of equal variance-covariance matrices for males and females was rejected, then we might still perform a discriminant analysis to describe mean differences. However, we would want to be more cautious about interpreting the results of a discriminant analysis, since one of the underlying assumptions of such a procedure was violated. More importantly, rejection of this hypothesis would indicate that different covariance models should be developed for males and females to explain their different covariance structures.

In either case, exploratory data analytic techniques such as principal component analysis, traditional factor analysis, or canonical correlation analysis, along with logical content considerations of the measures themselves, were used to develop the model or models indicated based on the same covariance information provided by the first subsample. Initial fitting and parameter estimation for the models were accomplished using Factorial Modeling, which is discussed in the original article by Lohnes (1979).

The second subsample was designated for confirmatory analysis of these models. No tests or exploratory analysis were performed on this second subsample. This subsample was used to obtain a second sample estimate of the variances and covariances of the measures employed in this study. These estimates were used to judge the adequacy of the developed models from the "exploratory" subsample. The technique of Factorial Modeling played a central role in this confirmatory stage, by providing a way to estimate the parameters of a given model and any residual covariances not accounted for by the model. This confirmatory analysis also provided direction to further revision of the models for future research and analysis.

This study can thus be viewed as the initial steps in the iterative process of model building and revision for the covariance structure of variables related to mathematics achievement and participation. The "split-sample" approach was used because of the lack of any already existing covariance models which attempt to explain the underlying structure of the covariances of such a comprehensive set of variables related to mathematics achievement and participation. If a set of sample covariance estimates was used to help build a model, then it would be highly inappropriate to use the same sample to make a case of the model's adequacy in explaining the population covariances. Therefore, we used two samples--one specifically for exploration and model development, and the other for testing the adequacy of the developed models.

Instrumentation

Background questionnaire measures

All of the students filled out an extensive background information questionnaire in which they reported their scores on the quantitative section of the Scholastic Aptitude Test, previous participation in high school mathematics and science courses, ad well as their academic major. The SAT scores were used as measures of quantitative achievement.

Three "previous participation" measures were derived from the high school coursework information. Participation in 1) precalculus mathematics (algebra, geometry, trigonometry, and any mathematics subjects which did not require calculus), 2) calculus, and 3) physical science (physics, chemistry, and computer science) were measured in semester grade points according to the scale: A = 5, B = 4, C = 3, D = 2, F = 1. For example, two semesters of "A" work and one semester of "B" work would result in 14 semester grade points. Two measures of "planned future participation" were derived from the student's indicated academic

major. One measure was the number of college semester hours of mathematics (calculus level or above) required for the student's academic major. The other measure was the number of college semester hours of physical science and engineering required for the student's academic major. The measures provided convenient ways of quantifying previous and planned participation in mathematics, science and engineering for the purpose of comparing students' levels of participation and their academic choices.

Pretest measures and calculus achievement measures

All the students in the calculus course were administered a pretest covering the precalculus mathematics topics of algebra and trigonometry during the first week of the semester. The algebra pretest consisted of 25 multiple-choice items and the trigonometry pretest consisted of 16 multiple-choice items. While normally these measures are used for diagnostic purposes, they could also be considered as measures of previous achievement in precalculus mathematics for the purposes of this study. Of course, the scores of the unit exams and the final exam for the course itself were used as measures of current mathematics achievement.

Affective measures

In the first few weeks of the semester all students in the course were administered various mathematics attitude scales. The attitude measures used were Aiken's Revised Mathematics Attitude Scale (Aiken & Dreger, 1961) and four of the Fennema-Sherman Mathematics Attitude Scales: Usefulness of Mathematics, Confidence in Learning Mathematics, Mathematics as a Male Domain, and Effectance Motivation in Mathematics (Fennema & Sherman, 1976). A few of the items on these scales were reworded slightly in order to make them more appropriate for college students.

All of these scales are Likert scales. That is, they consist of a series of statements to which the individual responds with one of the following reactions: strongly agree, agree, undecided or neutral, disagree, or strongly disagree. Half of the statements are stated positively and half are stated negatively with regards to the attitude being measured. In the case of the scale Mathematics as a Male Domain, "positive" refers to the tendency not to stereotype mathematics as being more appropriate for males than females. The score on the scale is determined by assigning weights from 1 to 5 to each of the responses, with the direction depending on whether the statment is negative or positive, and then summing these weights. To control for course effects on these attitude measures, all students were administered any particular measure the same week of the semester. A separate "anxiety towards mathematics" scale was not administered since there is evidence that confidence and anxiety towards mathematics seem to reflect a single dimension (Fennema, 1977).

All of the above scales were further split into two subscales, corresponding to the "positive" and "negative" items. This was done for two reasons. First, this provided a convenient way to obtain multiple measurements of each possible affective variable. This consideration is important for developing covariance structural models. Secondly, the correlation between the two subscales of any particular scale would provide a measure of how differently students respond to items worded positively or negatively.

Cognitive measures

The cognitive measures employed in this study were chosen to give multiple indications of spatial ability and field independence/field dependence.

The measures of spatial ability chosen were a twelve-item version of the Visualization of Rotations section of the Purdue Spatial Visualization Tests

(PSVR, 1976), and parts 1 and 2 of the Card Rotations test from the Ekstrom, French, Harman and Dermon Kit of Factor-Referenced Cognitive Tests (Ekstrom, Kit, 1976).

The PSVR consists of items which require an individual to visualize the rotation of three-dimensional objects. Guay (1980) has argued that many of the other spatial ability tests used in educational research involve tasks that can be solved using analytical rather than spatial strategies. This would raise suspicions about the construct validity of such measures. The PSVR was designed to minimize the possibility that an analytic strategy administered to all students in the calculus course at the time of the pretest.

The Card Rotations test involves two-dimensional rotations. It is designed to be a measure of "spatial orientation", which is defined in the Ekstrom Kit as "the ability to perceive spatial patterns or to maintain orientation with respect to objects in space" (Ekstrom et al., 1976). The Card Rotations test was administered only to the special sample near the beginning of the semester, before any calculus tests were given.

At the same time as the administration of the Card Rotations test measures, the special sample was also administered tests representing multiple measurements of field independence/field dependence. Sections 2 and 3 of the Group Embedded Figures Test (GEFT, 1971) and parts 1 and 2 of the Hidden Patterns test from the Ekstrom Kit were chosen as measures of the cognitive style of field independence/field dependence.

The GEFT was designed as an adaptation of the Embedded Figures Test (an individually administered measure of field independence/field dependence) which would be appropriate for group testing (Witkin, Oltman, Raskin, and Karp, 1971). The first section of the GEFT is considered as a "warm-up" when the GEFT is administered to college students as it was in this study. The items on the GEFT

require an individual to locate a simple plane figure embedded in a more complex plane figure. The Hidden Patterns test is a similar measure which requires an individual to note whether or not a given line pattern is embedded in another pattern. Ekstrom et al. (1976) refer to the Hidden Patterns test as a measure of a factor called "flexibility of closure", and note that while it appears related to field independence/field dependence, there is the possibility that they are not identical constructs.

Following is a summary of the measures employed in this study and the system of abbreviations used to refer to them.

Abbreviation	Description
ALG	Algebra pretest (25 items)
TRIG	Trigonometry pretest (16 items)
UNIT1, UNIT2, UNIT3, UNIT4	Calculus unit exams (out of 100 points)
FINAL	Calculus final exam (40 items)
QSAT	Quantitative SAT score
HSPC, HSCA, HSPS	Semester grade points in precalculus, calculus, and physical science, respectively
RQMA, RQPS	Semester hours required in math and physical science/engineering respectively.
CR1, CR2	Card Rotations parts 1 and 2 (80 items each)
HPT1, HPT2	Hidden Patterns parts 1 and 2 (200 items each)
GEFT2, GEFT3	Group Embedded Figures Test sections 2 and 3 (9 items each)
PSVR	Purdue Spatial Visualizations of Rotations (12 items)
AIKP, AIKN CLMP, CLMN EFMP, EFMN SMDP, SMDN PUMP, PUMN	"positive" and "negative" subsclaes of Aiken's Revised Attitude Toward Mathematics Scale, and the Fennema-Sherman Confidence in Learning Mathematics, Effectance Motivation, Mathematics as a Male Domain, and Usefulness of Mathematics Scales, respectively.

ANALYSES AND RESULTS

With the first subsample (N=134; 62 females and 72 males) the following null hypothesis was tested:

$$H_o: \quad C_f = C_m$$

where C_f and C_m denote the variance-covariance matrices of females and males, respectively. Using Box's M statistic with the sample covariance matrices we rejected this hypothesis ($p < .0001$).

This indicated that separate structural models should be developed for males and females. To aid in building these models, we subjected the sample correlations from the first subsample to principal component analysis, traditional factor analysis, and canonical correlate analysis. The goal of this exploratory analysis was the development of orthogonal latent variable models or factor models. That is, we desired models which would explain the covariances among the various measures in terms of a small number of uncorrelated unmeasured "factors."

Indications from the exploratory work for model development

Both principal component analysis and traditional factor analysis indicated that nine factors could explain 75 to 80 percent of the covariances and common variance among the 30 variates included in this study for both males and females. Inclusion of more factors in the models would, of course, explain more, but their relative contributions would be quite small. In the interests of parsimony, we concentrated on specifying nine factors for the two models.

The specification of variates for each factor can best be described by dividing the factors into three domains: cognitive, affective, and participation/preparation.

Cognitive factors

The measures of spatial ability used in the study, CR1, CR2, and PSVR, did not consistently load heavily on the same factor for either males or females. One could interpret this as evidence that a multi-factor definition of spatial ability is most appropriate. Perhaps if we had used more and/or different measuring instruments, this might be more apparent. Logically, one might wonder if the two-dimensional tasks represented by the Card Rotations tests might involve distinctly different skills than the three-dimensional tasks represented by the PSVR. However, the evidence for two distinct spatial factors for the measured employed in this study did not seem pressing enough to justify specifying more than one spatial ability factor. It must be emphasized that we are not claiming that this is an adequate view of spatial ability in general. We are merely saying that for the three measures employed in this study, it appeared that specification of a single factor would suffice. In this study, we abbreviated this spatial ability factor as SA.

On the other hand, the Hidden Patterns tests, HPT1 and HPT2, and the Group Embedded Figures Test sections, GEFT2 and GEFT3, clearly loaded on two distinct factors for both males and females. We found this somewhat surprising, given the superficially similar quality of the tasks represented in these measures. Nevertheless, the evidence of a two-factor structure was strong enough to specify two different factors. HPT1 and HPT2 specified a factor we called flexibility of closure (abbreviated FC) and GEFT2 and GEFT3 specified a factor we called field independence/field dependence (abbreviated FI/FD).

Affective Factors

There was strong support for a three-factor structure for the affective scales, as nearly 100% of their common variance could be explained by such a

structure for both males and females. The Aiken scales and the Fennema-Sherman Confidence in Learning Mathematics and Effectance Motivation in Mathematics scales all loaded heavily on one factor. This agreed with the results of a principal factor analysis that Fennema and Sherman performed with their scales with younger subjects (Fennema & Sherman, 1976). We referred to this factor as attitude toward learning mathematics (abbreviated ALM). The Usefulness of Mathematics scales loaded onto another factor which we called perceived usefulness of mathematics (abbreviated PUM), and the Mathematics as a Male Domain scales loaded onto a third factor which we called perceived appropriateness of mathematics for females (abbreviated PAMF).

While the three-factor structure for affective scales seemed sufficient for both males and females, we note that the exploratory canonical correlate analysis indicated that the affective factors may play a greater role for females than males. Four pairs of canonical correlates (significant at the .10 level) were found between the set of affective measures and the set of calculus unit and final exams. Only one significant pair of canonical correlates was found for the males. In examining the correlations themselves, the measures SMDP and SMDN enjoyed higher correlations with the achievement measures for females than males. Hence the factor PAMF may play a greater role in explaining correlations among the variates for females than males.

Participation and preparation factors

Three other factors were proposed for the models for both males and females: academic experience (abbreviated AE), precalculus preparation (abbreviated PCP) and academic plans (abbreviated AP). The measures of high school participation in mathematics and physical sciences (HSPC, HSCA, and HSPS) were used as specifying variates for AE. The quantitative score on the Scholastic

Aptitude Test (QSAT) and the algebra and trigonometry pretests (ALG and TRIG) were used as specifying variates for PCP. Finally, semester hours required in mathematics and physical science and engineering (RQMA and RQPS) were used as specifying variates for AP.

Indications from the confirmatory analysis

The models specified from the exploratory work were subjected to a confirmatory analysis using Factorial Modeling. This technique was developed recently by Paul Lohnes (1979) and is specifically intended for confirmatory analysis of orthogonal factor models.

The technique is based on some of the correlation matrix factoring techniques of Guttman (1940, 1944, 1952). It requires:

1) a specification of an exclusive set of variates for each factor

2) the specification of a key criterion to which the factors will be oriented.

3) an order for extraction.

We specified nine factors as described above with the calculus final exam acting as a criterion variate. The order of extraction of the factors was accomplished in the following order: AE, PCP, PAMF, POM, AP, ALM, SA, FI/FD, and FC.

The technique yields the structural coefficients of an orthogonal factor model for the variates and a residual correlation matrix for judging the adequacy of the models.

Since the specifications, criterion, and order of extraction used were identical for males and females, the differences in covariance structure would be revealed by the structure coefficients.

The goodness-of-fit of the models was quite good. When the residual correlation matrix was subjected to principal component analysis the first principal component for each model could only explain 8% of the common variance.

Sex Differences in Covariance Structure

An examination of the structural coefficients revealed that for both males and females, previous academic experience and participation are by far the most important factors in explaining variance in calculus achievement. The contributions of other affective and cognitive variables to explaining variance in calculus achievement are virtually negligible when academic experience and participation are controlled.

If we shift attention away from calculus achievement to the covariances among the other variables, we do note some interesting differences between males and females.

The structure of the covariances of the affective variates was quite different for males and females. For males, perceived usefulness of mathematics had a strong influence on their other attitudes toward mathematics, while for females there was little influence.

The structure of the covariances of the cognitive variates was also different for males and females, but this difference was not so striking as for the affective variables. The confirmatory analysis supported the notion of separate factors for field independence/field dependence and flexibility of closure for both males and females. However, for females, the flexibility of closure measures, HPT1 and HPT2, had modest loadings on the spatial ability factor. On the other hand, for males, the field independence/field dependence measures, GEFT2 and GEFT3, had modest loadings on the spatial ability factor, and HPT1 and HPT2 had modest loadings on field independence/field dependence.

Conclusions

We must point out that the results of our study may only be valid for the particular population we observed, namely college calculus students. Our models fit well for both males and females, and they indicate that for students of equal academic experience and preparation, differences in attitudes toward mathematics or in cognitive skills such as spatial ability make little contribution to explaining variance in calculus achievement. This implies that special programs designed to improve attitudes or spatial ability, even when successful, should not be expected to have a "transfer" effect to improvement in calculus achievement.

This may not be the case for students at other levels of mathematical training. Perhaps affective and cognitive variables play a greater role for younger students. It is also conceivable that these variables may be more important at higher levels of mathematical training, such as abstract algebra, analysis, or topology. What is needed is the development of similar structural models at various academic levels. A collection of such models would allow us to follow changes in covariance structure for these variables. In this way we can determine <u>which</u> factors are most important for <u>which</u> students at <u>which</u> level of their mathematical training.

While our models fit quite well, they certainly could be improved. Locus of control is one affective factor which has been of considerable interest in mathematics education research, especially with regard to sex differences. Our models were almost certainly underspecified in terms of spatial ability measures, as our exploratory analysis revealed that a multi-factor structure is probably more appropriate. In future research toward revision and improvement of our models, we would desire to include more measures of spatial ability and locus of control.

Covariance structural models appear to provide a means of comparing males and females that other procedures, such as discriminant analysis, would overlook. Factorial modeling is a tool which makes such an approach accessible and potentially fruitful to researchers in education. We recommend that this kind of research be pursued in order to develop more and better factor models to explain the complex interrelationships we observe among variables of educational interest.

Note: Full tables of correlations and structural coefficients follow the list of references. Other measures which were gathered in this study, but which were not included in the models developed appear in these tables. These measures were:

VSAT Verbal SAT score

NS1, NS2 Parts 1 and 2 of Nonsense Syllogisms (Ekstrom Kit)

DR1, DR2 Parts 1 and 2 of Diagramming Relationships (Ekstrom Kit)

LCIP, LCIN Two preliminary locus of control measures developed for future use.

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DESCRIPTIVE STATISTICS FOR SECOND SUBSAMPLE

	FEMALES		MALES	
VARIATE	MEAN	ST. DEV.	MEAN	ST. DEV.
HSPC	26.34	4.70	26.18	5.29
HSCA	3.10	3.97	2.89	3.84
HSPS	14.37	5.11	15.88	5.48
QSAT	557.90	58.81	598.89	65.76
ALG	14.60	3.99	14.99	4.35
TRIG	4.29	2.22	5.18	2.58
SMDP	27.65	2.72	25.94	4.01
SMDN	27.20	3.63	25.33	4.20
PUMP	22.87	4.63	25.13	3.70
PUMN	24.69	4.29	25.28	4.50
RQMA	9.81	11.17	11.39	10.21
RQPS	21.85	26.80	35.75	33.42
AIKP	32.58	8.41	31.17	8.20
AIKN	36.83	7.27	36.97	8.05
CLMP	20.75	4.06	21.87	3.82
CLMN	22.77	4.55	23.22	4.42
EFMP	19.87	4.34	20.07	4.61
EFMN	22.43	4.92	21.79	5.13
CR1	59.42	16.86	63.56	13.91
CR2	50.94	15.40	56.68	12.70
PSVR	5.26	2.69	6.82	3.59
GEFT2	5.97	2.10	6.39	2.18
GEFT3	7.53	1.96	7.97	1.29
HPT1	107.98	16.51	114.39	18.74
HPT2	109.42	19.68	116.58	19.63
VSAT	488.71	63.69	505.56	78.83
NS1	2.18	3.77	3.81	4.85
NS2	2.82	4.25	6.24	4.17
DR1	7.95	3.33	9.49	3.45
DR2	9.91	3.60	11.03	3.16
LCIP	5.02	1.67	5.57	1.79
LCIN	5.45	1.84	5.02	1.79
UNIT1	91.60	7.31	90.14	13.36
UNIT2	65.90	22.80	71.57	21.67
UNIT3	74.52	26.33	79.39	19.04
UNIT4	64.29	27.82	67.10	24.62
FINAL	18.08	7.12	18.85	7.02

CORRELATION MATRIX FOR FEMALES

VARIATE	HSPC	HSCA	HSPS	QSAT	ALG	TRIG	SMDP	SMDN
HSPC	1.000	0.189	0.331	0.079	0.006	0.124	0.174	0.124
HSCA	0.189	1.000	0.263	0.201	0.171	0.149	0.042	-0.023
HSPS	0.331	0.263	1.000	0.280	0.154	0.143	0.119	0.096
QSAT	0.079	0.201	0.280	1.000	0.469	0.199	0.082	0.013
ALG	0.006	0.171	0.154	0.469	1.000	0.381	-0.086	-0.071
TRIG	0.124	0.149	0.143	0.199	0.381	1.000	0.115	0.157
SMDP	0.174	0.042	0.119	0.082	-0.086	0.115	1.000	0.567
SMDN	0.124	-0.023	0.096	0.013	-0.071	0.157	0.567	1.000
PUMP	0.505	0.178	0.297	0.175	0.269	0.269	0.099	0.125
PUMN	0.307	0.159	0.207	0.328	0.181	0.356	0.284	0.309
RQMA	0.192	0.159	0.280	0.122	0.366	0.237	-0.058	-0.025
RQPS	-0.011	0.121	0.302	0.221	0.329	0.278	0.135	0.037
AIKP	0.229	0.292	0.271	0.331	0.342	0.130	0.020	0.157
AIKN	0.044	0.229	0.243	0.415	0.341	0.199	-0.035	0.056
CLMP	0.258	0.285	0.304	0.401	0.432	0.107	-0.121	-0.056
CLMN	0.054	0.290	0.253	0.461	0.376	0.101	-0.073	0.022
EFMP	0.155	0.167	0.242	0.266	0.257	0.073	0.060	0.157
EFMN	0.141	0.102	0.203	0.234	0.111	0.125	0.194	0.416
CR1	-0.200	-0.201	-0.089	0.054	0.114	0.095	-0.088	-0.102
CR2	-0.012	-0.199	-0.038	0.168	0.245	0.148	-0.002	-0.083
PSVR	0.017	0.017	0.071	0.160	0.240	0.123	-0.006	0.102
GEFT2	-0.071	-0.005	0.154	0.258	0.189	-0.015	0.010	-0.032
GEFT3	-0.132	0.029	0.069	0.227	0.236	0.076	0.026	-0.010
HPT1	-0.141	0.011	0.109	0.107	0.289	0.016	0.097	0.012
HPT2	-0.091	-0.108	0.125	0.079	0.163	0.023	0.146	0.091
VSAT	0.077	-0.017	0.050	0.387	0.093	-0.112	0.186	0.167
NS1	-0.031	0.141	0.118	0.222	0.137	0.127	0.040	-0.109
NS2	0.026	-0.015	0.320	0.204	0.022	0.060	0.019	0.066
DR1	-0.039	-0.101	0.227	0.295	0.046	-0.197	0.019	0.061
DR2	0.177	-0.070	0.327	0.249	-0.013	-0.250	0.204	0.019
LCIP	-0.266	0.020	0.068	0.029	0.013	0.113	0.082	0.173
LCIN	-0.168	-0.066	-0.163	-0.069	-0.289	0.133	-0.041	0.102
UNIT1	-0.046	0.205	-0.046	0.089	0.242	0.202	-0.122	0.151
UNIT2	0.181	0.230	0.295	0.218	0.347	0.368	0.134	0.176
UNIT3	0.223	0.173	0.055	0.095	0.355	0.321	-0.074	0.033
UNIT4	0.244	0.253	0.347	0.226	0.404	0.381	-0.061	-0.035
FINAL	0.269	0.434	0.363	0.351	0.440	0.280	0.031	0.075

CORRELATION MATRIX FOR FEMALES

VARIATE	PUMP	PUMN	RQMA	RQPS	AIKP	AIKN	CLMP	CLMN
HSPC	0.505	0.307	0.192	-0.011	0.229	0.044	0.258	0.054
HSCA	0.178	0.159	0.159	0.121	0.292	0.229	0.285	0.290
HSPS	0.297	0.207	0.280	0.302	0.271	0.243	0.304	0.253
QSAT	0.175	0.328	0.122	0.221	0.331	0.415	0.401	0.461
ALG	0.269	0.181	0.366	0.329	0.342	0.341	0.432	0.376
TRIG	0.269	0.356	0.237	0.278	0.130	0.199	0.107	0.101
SMDP	0.099	0.284	-0.058	0.135	0.020	-0.035	-0.121	-0.073
SMDN	0.125	0.309	-0.025	0.037	0.157	0.056	-0.056	0.022
PUMP	1.000	0.695	0.280	0.325	0.312	0.070	0.448	0.159
PUMN	0.695	1.000	0.177	0.352	0.361	0.279	0.333	0.260
RQMA	0.280	0.177	1.000	0.371	0.308	0.199	0.326	0.250
RQPS	0.325	0.352	0.371	1.000	0.327	0.431	0.361	0.446
AIKP	0.312	0.361	0.308	0.327	1.000	0.820	0.688	0.738
AIKN	0.070	0.279	0.199	0.431	0.820	1.000	0.617	0.828
CLMP	0.448	0.333	0.326	0.361	0.688	0.617	1.000	0.803
CLMN	0.159	0.260	0.250	0.446	0.738	0.828	0.803	1.000
EFMP	0.526	0.416	0.154	0.357	0.665	0.457	0.514	0.441
EFMN	0.474	0.585	0.095	0.254	0.627	0.482	0.432	0.434
CR1	-0.143	-0.122	-0.031	-0.068	-0.077	0.069	0.037	0.049
CR2	-0.058	-0.022	-0.052	-0.079	0.026	0.074	0.173	0.144
PSVR	0.023	-0.079	0.109	0.081	0.319	0.355	0.265	0.315
GEFT2	-0.132	0.018	-0.036	-0.159	0.121	0.194	-0.044	-0.023
GEFT3	-0.235	0.024	0.009	0.014	0.116	0.274	-0.009	0.112
HPT1	-0.137	-0.113	0.135	0.033	-0.008	0.054	0.095	0.064
HPT2	0.055	0.254	0.079	0.042	0.099	0.184	0.274	0.188
VSAT	0.049	0.117	-0.085	0.005	-0.177	-0.141	-0.003	-0.058
NS1	0.049	-0.053	-0.046	-0.039	-0.079	-0.087	-0.018	-0.079
NS2	0.177	-0.071	0.152	0.123	-0.105	-0.094	0.107	-0.027
DR1	-0.081	-0.111	0.001	-0.005	0.036	0.066	-0.054	0.026
DR2	0.039	-0.007	-0.003	-0.063	0.134	0.103	0.090	0.040
LCIP	0.142	0.142	-0.190	0.133	0.149	0.171	0.218	0.264
LCIN	0.031	-0.004	-0.032	0.038	-0.222	-0.129	-0.035	-0.046
UNIT1	0.332	0.281	0.200	0.135	0.083	0.085	0.265	0.189
UNIT2	0.397	0.331	0.292	0.331	0.214	0.256	0.249	0.270
UNIT3	0.335	0.075	0.187	0.236	0.032	0.024	0.180	0.076
UNIT4	0.342	0.131	0.179	0.308	0.238	0.228	0.320	0.278
FINAL	0.478	0.282	0.287	0.340	0.212	0.246	0.418	0.356

CORRELATION MATRIX FOR FEMALES

VARIATE	EFMP	EFMN	CR1	CR2	PSVR	GEFT2	GEFT3	HPT1
HSPC	0.155	0.141	-0.200	-0.012	0.017	-0.071	-0.132	-0.141
HSCA	0.167	0.102	-0.201	-0.199	0.017	-0.005	0.029	0.011
HSPS	0.242	0.203	-0.089	-0.038	0.071	0.154	0.069	0.109
QSAT	0.266	0.234	0.054	0.168	0.160	0.258	0.227	0.107
ALG	0.257	0.111	0.114	0.245	0.240	0.189	0.236	0.289
TRIG	0.073	0.125	0.095	0.148	0.123	-0.015	0.076	0.016
SMDP	0.060	0.194	-0.088	-0.002	-0.006	0.010	0.026	0.097
SMDN	0.157	0.416	-0.102	-0.083	0.102	-0.032	-0.010	0.012
PUMP	0.526	0.474	-0.143	-0.058	0.023	-0.132	-0.235	-0.137
PUMN	0.416	0.585	-0.122	-0.022	-0.079	0.018	0.024	-0.113
RQMA	0.154	0.095	-0.031	-0.052	0.109	-0.036	0.009	0.135
RQPS	0.357	0.254	-0.068	-0.079	0.081	-0.159	0.014	0.033
AIKP	0.665	0.627	-0.077	0.026	0.319	0.121	0.116	-0.008
AIKN	0.457	0.482	0.069	0.074	0.355	0.194	0.274	0.054
CLMP	0.514	0.432	0.037	0.173	0.265	-0.044	-0.009	0.095
CLMN	0.441	0.434	0.049	0.144	0.315	-0.023	0.112	0.064
EFMP	1.000	0.797	-0.162	-0.103	0.091	-0.063	-0.129	-0.097
EFMN	0.797	1.000	-0.180	-0.142	0.098	0.029	-0.014	-0.057
CR1	-0.162	-0.180	1.000	0.765	0.280	0.264	0.145	0.363
CR2	-0.103	-0.142	0.765	1.000	0.367	0.164	0.175	0.340
PSVR	0.091	0.098	0.280	0.367	1.000	0.113	0.201	0.218
GEFT2	-0.063	0.029	0.264	0.164	0.113	1.000	0.690	0.334
GEFT3	-0.129	-0.014	0.145	0.175	0.201	0.690	1.000	0.283
HPT1	-0.097	-0.057	0.363	0.340	0.218	0.334	0.283	1.000
HPT2	0.052	0.135	0.422	0.316	0.169	0.196	0.078	0.693
VSAT	0.110	0.199	-0.152	0.009	0.054	0.076	0.097	0.038
NS1	0.121	-0.115	-0.056	0.015	0.148	0.129	0.081	-0.061
NS2	-0.078	-0.105	0.088	0.080	0.001	0.104	0.103	0.112
DR1	0.182	0.135	0.157	0.200	0.274	0.196	-0.053	0.003
DR2	0.181	0.165	0.211	0.302	0.264	0.234	0.037	0.195
LCIP	0.428	0.296	0.161	0.138	-0.096	-0.138	-0.228	0.086
LCIN	-0.152	-0.088	0.153	-0.041	-0.231	-0.239	-0.403	-0.043
UNIT1	0.110	0.127	0.103	-0.031	0.129	-0.123	-0.138	-0.033
UNIT2	0.259	0.174	0.053	0.120	-0.022	-0.042	-0.009	0.042
UNIT3	0.192	-0.005	0.099	0.130	0.043	-0.091	-0.022	-0.047
UNIT4	0.248	0.096	0.155	0.197	0.048	0.081	0.146	0.047
FINAL	0.319	0.216	0.010	0.053	0.077	-0.050	-0.011	0.005

CORRELATION MATRIX FOR FEMALES

VARIATE	HPT2	VSAT	NS1	NS2	DR1	DR2	LCIP	LCIN
HSPC	-0.091	0.077	-0.031	0.026	-0.039	0.177	-0.266	-0.168
HSCA	-0.108	-0.017	0.141	-0.015	-0.101	-0.070	0.020	-0.066
HSPS	0.125	0.050	0.118	0.320	0.227	0.327	0.068	-0.163
OSAT	0.079	0.387	0.222	0.204	0.295	0.249	0.029	-0.069
ALG	0.163	0.093	0.137	0.022	0.046	-0.013	0.013	-0.289
TRIG	0.023	-0.112	0.127	0.060	-0.197	-0.250	0.113	0.133
SMDP	0.146	0.186	0.040	0.019	0.019	0.204	0.082	-0.041
SMDN	0.091	0.167	-0.109	0.066	0.061	0.019	0.173	0.102
PUMP	0.055	0.049	0.049	0.177	-0.081	0.039	0.142	0.031
PUMN	0.254	0.117	-0.053	-0.071	-0.111	-0.007	0.142	-0.004
RQMA	0.079	-0.085	-0.046	0.152	0.001	-0.003	-0.190	-0.032
RQPS	0.042	0.005	-0.039	0.123	-0.005	-0.063	0.133	0.038
AIKP	0.099	-0.177	-0.079	-0.105	0.036	0.134	0.149	-0.222
AIKN	0.184	-0.141	-0.087	-0.094	0.066	0.103	0.171	-0.129
CLMP	0.274	-0.003	-0.018	0.107	-0.054	0.090	0.218	-0.035
CLMN	0.188	-0.058	-0.079	-0.027	0.026	0.040	0.264	-0.046
EFMP	0.052	0.110	0.121	-0.078	0.182	0.181	0.428	-0.152
EFMN	0.135	0.199	-0.115	-0.105	0.135	0.165	0.296	-0.088
CR1	0.422	-0.152	-0.056	0.088	0.157	0.211	0.161	0.153
CR2	0.316	0.009	0.015	0.080	0.200	0.302	0.138	-0.041
PSVR	0.169	0.054	0.148	0.001	0.274	0.264	-0.096	-0.231
GEFT2	0.196	0.076	0.129	0.104	0.196	0.234	-0.138	-0.239
GEFT3	0.078	0.097	0.081	0.103	-0.053	0.037	-0.228	-0.403
HPT1	0.693	0.038	-0.061	0.112	0.003	0.191	0.086	-0.043
HPT2	1.000	0.038	-0.105	-0.070	-0.007	0.230	0.224	0.246
VSAT	0.038	1.000	0.248	0.349	0.311	0.266	-0.001	0.118
NS1	-0.105	0.248	1.000	0.312	0.107	0.064	0.284	-0.018
NS2	-0.070	0.349	0.312	1.000	0.115	0.037	0.204	0.278
DR1	-0.007	0.311	0.107	0.115	1.000	0.642	0.125	0.037
DR2	0.230	0.266	0.064	0.037	0.642	1.000	0.017	-0.188
LCIP	0.224	-0.001	0.284	0.204	0.125	0.017	1.000	0.282
LCIN	0.246	0.118	-0.018	0.278	0.037	-0.188	0.282	1.000
UNIT1	0.168	-0.010	0.006	-0.009	-0.164	-0.081	0.166	0.373
UNIT2	0.078	0.011	0.167	0.203	-0.010	0.092	0.193	0.158
UNIT3	-0.095	-0.008	0.138	0.138	-0.151	-0.167	0.129	0.158
UNIT4	-0.003	-0.002	0.162	0.239	-0.173	0.048	0.211	0.005
FINAL	-0.014	0.140	0.205	0.227	-0.058	0.038	0.149	-0.063

CORRELATION MATRIX FOR FEMALES

VARIATE	UNIT1	UNIT2	UNIT3	UNIT4	FINAL
HSPC	-0.046	0.181	0.223	0.244	0.269
HSCA	0.205	0.230	0.173	0.253	0.434
HSPS	-0.046	0.295	0.055	0.347	0.363
QSAT	0.089	0.218	0.095	0.226	0.351
ALG	0.242	0.347	0.355	0.404	0.440
TRIG	0.202	0.368	0.321	0.381	0.280
SMDP	-0.122	0.134	-0.074	-0.061	0.031
SMDN	0.151	0.176	0.033	-0.035	0.075
PUMP	0.332	0.397	0.335	0.342	0.478
PUMN	0.281	0.331	0.075	0.131	0.282
RQMA	0.200	0.292	0.187	0.179	0.287
RQPS	0.135	0.331	0.236	0.308	0.340
AIKP	0.083	0.214	0.032	0.238	0.212
AIKN	0.085	0.256	0.024	0.228	0.246
CLMP	0.265	0.249	0.180	0.320	0.418
CLMN	0.189	0.270	0.076	0.278	0.356
EFMP	0.110	0.259	0.192	0.248	0.319
EFMN	0.127	0.174	-0.005	0.096	0.216
CR1	0.103	0.053	0.099	0.155	0.010
CR2	-0.031	0.120	0.130	0.197	0.053
PSVR	0.129	-0.022	0.043	0.048	0.077
GEFT2	-0.123	-0.042	-0.091	0.081	-0.050
GEFT3	-0.138	-0.009	-0.022	0.146	-0.011
HPT1	-0.033	0.042	-0.047	0.047	0.005
HPT2	0.168	0.078	-0.095	-0.003	-0.014
VSAT	-0.010	0.011	-0.008	-0.002	0.140
NS1	0.006	0.167	0.138	0.162	0.205
NS2	-0.009	0.203	0.138	0.239	0.227
DR1	-0.164	-0.010	-0.151	-0.173	-0.058
DR2	-0.081	0.092	-0.167	0.048	0.038
LCIP	0.166	0.193	0.129	0.211	0.149
LCIN	0.373	0.158	0.158	0.005	-0.063
UNIT1	1.000	0.496	0.563	0.470	0.525
UNIT2	0.496	1.000	0.699	0.722	0.719
UNIT3	0.563	0.699	1.000	0.811	0.753
UNIT4	0.470	0.722	0.811	1.000	0.773
FINAL	0.525	0.719	0.753	0.773	1.000

COMMUNALITIES AND DISTURBANCE TERMS FOR FEMALES

VARIATE	COMMUNALITY	DISTURBANCE
HSPC	0.520	0.693
HSCA	0.617	0.619
HSPS	0.612	0.623
QSAT	0.541	0.678
ALG	0.820	0.424
TRIG	0.419	0.762
SMDP	0.156	0.918
SMDN	0.445	0.745
PUMP	0.994	0.079
PUMN	0.636	0.603
RQMA	0.325	0.822
RQPS	0.973	0.163
AIKP	0.902	0.314
AIKN	0.738	0.512
CLMP	0.481	0.720
CLMN	0.512	0.699
EFMP	0.648	0.593
EFMN	0.730	0.519
CR1	0.945	0.235
CR2	0.833	0.408
PSVR	0.251	0.866
GEFT2	0.963	0.191
GEFT3	0.716	0.533
HPT1	0.838	0.402
HPT2	0.914	0.292
VSAT	0.101	0.948
NS1	0.147	0.923
NS2	0.190	0.900
DR1	0.088	0.955
DR2	0.235	0.875
LCIP	0.161	0.916
LCIN	0.246	0.868
UNIT1	0.266	0.857
UNIT2	0.311	0.830
UNIT3	0.292	0.842
UNIT4	0.366	0.796
FINAL	0.492	0.713

FACTOR STRUCTURE MATRIX FOR FEMALES

VARIATE	AE	PCP	PAMP	PUM	PAP	ALM	SA	FI/FD	FC
HSPC	0.617	-0.097	0.009	0.297	-0.176	-0.003	0.021	0.063	0.085
HSCA	0.759	0.022	-0.033	-0.158	-0.025	-0.019	-0.086	0.072	0.021
HSPS	0.741	0.045	0.033	-0.031	0.160	0.025	0.087	-0.133	-0.088
QSAT	0.275	0.663	-0.057	-0.067	-0.070	-0.084	-0.018	-0.065	0.044
ALG	0.173	0.886	-0.004	-0.001	0.021	0.012	-0.006	-0.014	-0.071
TRIG	0.196	0.585	0.075	0.081	0.040	0.075	0.033	0.103	0.089
SMDP	0.142	-0.026	-0.277	0.105	0.054	-0.141	-0.022	-0.011	-0.157
SMDN	0.076	-0.010	0.633	0.085	0.043	-0.114	-0.017	-0.009	-0.127
PUMP	0.420	0.208	0.068	0.877	-0.009	0.022	0.002	0.013	0.013
PUMN	0.297	0.271	0.101	0.641	0.068	-0.169	-0.018	-0.099	-0.100
RQMA	0.291	0.274	0.035	0.105	0.384	0.010	0.008	0.003	-0.076
RQPS	0.208	0.324	-0.079	0.211	0.880	-0.002	-0.002	-0.001	0.015
AIKP	0.376	0.280	0.177	0.109	0.177	-0.773	0.068	0.077	-0.001
AIKN	0.261	0.365	0.106	-0.114	0.311	-0.632	0.126	-0.007	-0.016
CLMP	0.397	0.350	0.063	0.228	0.146	-0.239	0.160	0.145	-0.142
CLMN	0.304	0.361	0.104	-0.045	0.309	-0.367	0.138	0.156	-0.057
EFMP	0.264	0.214	0.135	0.413	0.157	-0.545	-0.049	0.140	-0.016
EFMN	0.204	0.143	0.310	0.414	0.095	-0.614	-0.061	0.017	-0.105
CR1	-0.227	0.186	-0.049	-0.100	-0.067	0.074	0.914	-0.042	-0.017
CR2	-0.135	0.304	-0.104	-0.067	-0.168	0.048	0.819	0.075	0.034
PSVR	0.049	0.238	0.124	-0.081	0.029	-0.195	0.360	0.028	-0.025
GEFT2	0.045	0.199	-0.047	-0.203	-0.220	-0.227	0.183	-0.863	-0.017
GEFT3	0.003	0.259	-0.039	-0.305	-0.015	-0.161	0.090	-0.720	0.046
HPT1	0.008	0.226	-0.080	-0.212	0.016	0.048	0.320	-0.220	-0.763
HPT2	-0.034	0.150	-0.035	0.073	-0.009	-0.055	0.398	-0.088	-0.846
VSAT	0.041	0.158	0.019	0.006	-0.086	0.160	-0.154	-0.112	-0.066
NS1	0.125	0.177	-0.162	-0.047	-0.156	0.124	-0.089	-0.085	0.131
NS2	0.153	0.068	0.065	0.079	0.077	0.297	0.112	-0.197	0.077
DR1	0.037	0.067	0.053	-0.138	-0.004	-0.091	0.191	-0.043	0.117
DR2	0.178	-0.044	-0.162	-0.021	-0.106	-0.208	0.321	-0.074	-0.106
LCIP	-0.050	0.069	0.122	0.163	0.056	-0.096	0.174	0.207	-0.163
LCIN	-0.174	-0.118	0.151	0.132	0.107	0.265	0.096	0.189	-0.188
UNIT1	0.078	0.230	0.293	0.264	0.028	0.183	0.063	0.088	-0.077
UNIT2	0.334	0.329	0.089	0.208	0.141	0.076	0.108	0.051	0.010
UNIT3	0.203	0.308	0.113	0.174	0.074	0.250	0.105	0.064	0.172
UNIT4	0.394	0.355	0.030	0.093	0.089	0.085	0.199	-0.039	0.137
FINAL	0.514	0.360	0.077	0.192	0.089	0.181	0.071	0.055	0.081

SQUARED STRUCTURE COEFFICIENTS FOR FEMALES

VARIATE	AE	PCP	PAMF	PUM	PAP	ALM	SA	FI/FD	FC
HSPC	0.380	0.009	0.000	0.088	0.031	0.000	0.000	0.004	0.007
HSCA	0.576	0.001	0.001	0.025	0.001	0.000	0.007	0.005	0.000
HSPS	0.548	0.002	0.001	0.001	0.026	0.001	0.008	0.018	0.008
QSAT	0.075	0.439	0.003	0.004	0.005	0.007	0.000	0.004	0.002
ALG	0.030	0.785	0.000	0.000	0.000	0.000	0.000	0.000	0.005
TRIG	0.038	0.342	0.006	0.006	0.002	0.006	0.001	0.011	0.008
SMDP	0.020	0.001	0.077	0.011	0.003	0.020	0.000	0.000	0.025
SMDW	0.006	0.000	0.401	0.007	0.002	0.013	0.000	0.000	0.016
PUMP	0.176	0.043	0.005	0.769	0.000	0.000	0.000	0.000	0.000
PUMW	0.088	0.073	0.010	0.411	0.005	0.028	0.000	0.010	0.010
RQMA	0.085	0.075	0.001	0.011	0.147	0.000	0.000	0.000	0.006
RQPS	0.043	0.105	0.006	0.045	0.774	0.000	0.000	0.000	0.000
AIKP	0.141	0.078	0.031	0.012	0.031	0.597	0.005	0.006	0.000
AIKW	0.068	0.133	0.011	0.013	0.097	0.399	0.016	0.000	0.000
CLMP	0.158	0.122	0.004	0.052	0.021	0.057	0.025	0.021	0.020
CLMW	0.092	0.130	0.011	0.002	0.096	0.134	0.019	0.024	0.003
EFMP	0.070	0.046	0.018	0.171	0.025	0.297	0.002	0.020	0.000
EFMW	0.042	0.020	0.096	0.171	0.009	0.377	0.004	0.000	0.011
CR1	0.051	0.034	0.002	0.010	0.005	0.005	0.835	0.002	0.000
CR2	0.018	0.092	0.011	0.005	0.028	0.002	0.670	0.006	0.001
PSVR	0.002	0.057	0.015	0.007	0.001	0.038	0.129	0.001	0.001
GEFT2	0.002	0.040	0.002	0.041	0.048	0.052	0.033	0.745	0.000
GEFT3	0.000	0.067	0.001	0.093	0.000	0.026	0.008	0.519	0.002
HPT1	0.000	0.051	0.006	0.045	0.000	0.002	0.102	0.049	0.583
HPT2	0.001	0.022	0.001	0.005	0.000	0.003	0.158	0.008	0.715
VSAT	0.002	0.025	0.000	0.000	0.007	0.026	0.024	0.012	0.004
NS1	0.016	0.031	0.026	0.002	0.024	0.015	0.008	0.007	0.017
NS2	0.023	0.005	0.004	0.006	0.006	0.088	0.013	0.039	0.006
DR1	0.001	0.004	0.003	0.019	0.000	0.008	0.036	0.002	0.014
DR2	0.032	0.002	0.026	0.000	0.011	0.043	0.103	0.005	0.011
LCIP	0.002	0.005	0.015	0.027	0.003	0.009	0.030	0.043	0.026
LCIN	0.030	0.014	0.023	0.018	0.012	0.070	0.009	0.036	0.035
UNIT1	0.006	0.053	0.086	0.069	0.001	0.034	0.004	0.008	0.006
UNIT2	0.112	0.108	0.008	0.043	0.020	0.006	0.012	0.003	0.000
UNIT3	0.041	0.095	0.013	0.030	0.005	0.062	0.011	0.004	0.029
UNIT4	0.155	0.126	0.001	0.009	0.008	0.007	0.040	0.002	0.019
FINAL	0.264	0.129	0.006	0.037	0.008	0.033	0.005	0.003	0.006

FINAL RESIDUAL MATRIX FOR FEMALES

VARIATE	HSPC	HSCA	HSPS	QSAT	ALG	TRIG	SMDP	SMDN
HSPC	0.480	-0.239	-0.071	-0.018	-0.003	0.027	0.079	0.064
HSCA	-0.239	0.383	-0.281	-0.036	0.022	-0.002	-0.056	-0.046
HSPS	-0.071	-0.281	0.388	0.057	-0.024	-0.018	0.009	0.007
QSAT	-0.018	-0.036	0.057	0.459	-0.161	-0.220	0.049	0.039
ALG	-0.003	0.022	-0.024	-0.161	0.180	-0.164	-0.100	-0.081
TRIG	0.027	-0.002	-0.018	-0.220	-0.164	0.581	0.139	0.113
SMDP	0.079	-0.056	0.009	0.049	-0.100	0.139	0.844	0.684
SMDN	0.064	-0.046	0.007	0.039	-0.081	0.113	0.684	0.555
PUMP	0.002	-0.005	0.005	-0.014	0.015	-0.014	-0.022	-0.018
PUMN	-0.014	0.038	-0.035	0.104	-0.117	0.109	0.166	0.134
RQMA	0.082	-0.039	-0.014	-0.099	0.060	-0.002	-0.124	-0.101
RQPS	-0.016	0.008	0.003	0.020	-0.012	0.000	0.025	0.020
AIKP	0.013	0.014	-0.027	0.013	0.037	-0.089	-0.104	-0.084
AIKN	0.003	0.015	-0.021	0.071	-0.026	-0.032	-0.126	-0.103
CLMP	0.004	0.019	-0.026	0.087	0.047	-0.194	-0.233	-0.189
CLMN	-0.041	0.050	-0.030	0.147	0.001	-0.174	-0.145	-0.118
EFMP	-0.091	0.010	0.055	0.062	0.026	-0.124	-0.064	-0.052
EFMN	-0.072	0.006	0.046	0.089	-0.051	-0.003	0.102	0.083
CR1	-0.039	0.031	-0.008	-0.001	-0.007	0.015	-0.024	-0.019
CR2	0.068	-0.056	0.017	0.003	0.010	-0.025	0.042	0.034
PSVR	0.030	-0.008	-0.013	-0.015	0.023	-0.028	0.011	0.009
GEFT2	-0.007	-0.010	0.016	0.011	-0.001	-0.011	-0.012	-0.009
GEFT3	0.019	0.026	-0.045	-0.030	0.002	0.031	0.032	0.026
HPT1	0.014	0.024	-0.040	-0.034	0.030	-0.020	-0.007	-0.006
HPT2	-0.010	-0.018	0.029	0.025	-0.022	0.014	0.005	0.004
VSAT	0.066	-0.053	0.014	0.273	-0.061	-0.200	0.201	0.163
NS1	-0.107	0.023	0.051	0.044	-0.033	0.012	0.031	0.025
NS2	-0.067	-0.088	0.155	0.142	-0.066	-0.037	0.059	0.048
DR1	-0.027	-0.136	0.182	0.222	-0.009	-0.242	0.055	0.044
DR2	0.058	-0.184	0.177	0.199	-0.007	-0.219	0.101	0.082
LCIP	-0.271	0.089	0.095	0.034	-0.047	0.052	0.072	0.058
LCIN	-0.091	0.101	-0.053	0.127	-0.169	0.184	0.015	0.012
UNIT1	-0.148	0.197	-0.126	-0.023	0.019	-0.010	-0.059	-0.048
UNIT2	-0.037	0.015	0.010	-0.051	-0.003	0.065	0.106	0.086
UNIT3	0.068	0.050	-0.111	-0.122	0.057	0.031	-0.020	-0.016
UNIT4	0.010	-0.018	0.014	-0.101	0.029	0.062	-0.076	-0.062
FINAL	-0.066	0.075	-0.041	0.011	0.037	-0.085	0.004	0.003

FINAL RESIDUAL MATRIX FOR FEMALES

VARIATE	PUMP	PUMN	RQMA	RQPS	AIKP	AIKN	CLMP	CLMN
HSPC	0.002	-0.014	0.082	-0.016	0.013	0.003	0.004	-0.041
HSCA	-0.005	0.038	-0.039	0.008	0.014	0.015	0.019	0.050
HSPS	0.005	-0.035	-0.014	0.003	-0.027	-0.021	-0.026	-0.030
QSAT	-0.014	0.104	-0.099	0.020	0.013	0.071	0.087	0.147
ALG	0.015	-0.117	0.060	-0.012	0.037	-0.026	0.047	0.001
TRIG	-0.014	0.109	-0.002	0.000	-0.089	-0.032	-0.194	-0.174
SMDP	-0.022	0.166	-0.124	0.025	-0.104	-0.126	-0.233	-0.145
SMDN	-0.018	0.134	-0.101	0.020	-0.084	-0.103	-0.189	-0.118
PUMP	0.006	-0.048	0.011	-0.002	0.006	-0.005	0.010	-0.003
PUMN	-0.048	0.364	-0.086	0.017	-0.048	0.038	-0.079	0.020
RQMA	0.011	-0.086	0.675	-0.134	0.043	-0.084	0.023	-0.057
RQPS	-0.002	0.017	-0.134	0.027	-0.009	0.017	-0.005	0.011
AIKP	0.006	-0.048	0.043	-0.009	0.098	0.062	0.172	0.149
AIKN	-0.005	0.038	-0.084	0.017	0.062	0.262	0.187	0.256
CLMP	0.010	-0.079	0.023	-0.005	0.172	0.187	0.519	0.374
CLMN	-0.003	0.020	-0.057	0.011	0.149	0.256	0.374	0.488
EFMP	0.012	-0.090	-0.085	0.017	-0.019	-0.043	0.064	0.024
EFMN	-0.009	0.069	-0.095	0.019	-0.079	-0.020	0.018	0.052
CR1	0.001	-0.009	0.013	-0.003	-0.015	0.006	-0.026	-0.020
CR2	-0.005	0.034	-0.026	0.005	0.022	-0.019	0.041	0.030
PSVR	0.019	-0.146	0.020	-0.004	0.038	0.055	0.057	0.061
GEFT2	0.003	-0.022	0.006	-0.001	-0.004	-0.013	-0.012	-0.020
GEFT3	-0.008	0.061	-0.017	0.003	0.011	0.036	0.032	0.057
HPT1	0.015	-0.117	0.029	-0.006	-0.008	-0.075	-0.052	-0.061
HPT2	-0.011	0.085	-0.021	0.004	0.006	0.054	0.038	0.045
VSAT	-0.009	0.068	-0.113	0.022	-0.082	-0.065	0.005	-0.009
NS1	0.007	-0.057	-0.051	0.010	-0.005	-0.032	-0.011	-0.040
NS2	0.021	-0.157	0.052	-0.010	0.021	-0.007	0.081	0.003
DR1	0.008	-0.061	-0.005	0.001	-0.070	-0.068	-0.092	-0.065
DR2	0.008	-0.059	-0.003	0.001	-0.048	-0.053	-0.040	-0.065
LCIP	-0.001	0.009	-0.250	0.050	-0.004	0.063	0.057	0.130
LCIN	-0.002	0.019	-0.027	0.005	-0.001	0.079	0.014	0.050
UNIT1	-0.004	0.028	0.057	-0.011	0.034	0.078	0.080	0.095
UNIT2	-0.002	0.012	0.025	-0.005	-0.019	0.055	-0.077	0.012
UNIT3	0.017	-0.129	0.003	-0.001	-0.002	-0.008	-0.008	-0.047
UNIT4	0.016	-0.124	-0.070	0.014	0.015	0.007	0.017	0.022
FINAL	0.008	-0.060	-0.014	0.003	-0.001	0.074	0.062	0.096

FINAL RESIDUAL MATRIX FOR FEMALES

VARIATE	EFMP	EFMN	CR1	CR2	PSVR	GEFT2	GEFT3	HPT1
HSPC	-0.091	-0.072	-0.039	0.068	0.030	-0.007	0.019	0.014
HSCA	0.010	0.006	0.031	-0.056	-0.008	-0.010	0.026	0.024
HSPS	0.055	0.046	-0.008	0.017	-0.013	0.016	-0.045	-0.040
QSAT	0.062	0.089	-0.001	0.003	-0.015	0.011	-0.030	-0.034
ALG	0.026	-0.051	-0.007	0.010	0.023	-0.001	0.002	0.030
TRIG	-0.124	-0.003	0.015	-0.025	-0.028	-0.011	0.031	-0.020
SMDP	-0.064	0.102	-0.024	0.042	0.011	-0.012	0.032	-0.007
SMDN	-0.052	0.083	-0.019	0.034	0.009	-0.009	0.026	-0.006
PUMP	0.012	-0.009	0.001	-0.005	0.019	0.003	-0.008	0.015
PUMN	-0.090	0.069	-0.009	0.034	-0.146	-0.022	0.061	-0.117
ROMA	-0.085	-0.095	0.013	-0.026	0.020	0.006	-0.017	0.029
ROPS	0.017	0.019	-0.003	0.005	-0.004	-0.001	0.003	-0.006
AIKP	-0.019	-0.079	-0.015	0.022	0.038	-0.004	0.011	-0.008
AIKN	-0.043	-0.020	0.006	-0.019	0.055	-0.013	0.036	-0.075
CLMP	0.064	0.018	-0.026	0.041	0.057	-0.012	0.032	-0.052
CLMN	0.024	0.052	-0.020	0.030	0.061	-0.020	0.057	-0.061
EFMP	0.352	0.143	0.008	-0.007	-0.053	0.012	-0.033	0.009
EFMN	0.143	0.270	0.003	0.001	-0.055	-0.004	0.012	-0.008
CR1	0.008	0.003	0.055	-0.093	-0.066	0.013	-0.035	-0.019
CR2	-0.007	0.001	-0.093	0.167	0.028	-0.020	0.055	0.030
PSVR	-0.053	-0.055	-0.066	0.028	0.749	-0.028	0.077	0.037
GEFT2	0.012	-0.004	0.013	-0.020	-0.028	0.037	-0.102	-0.005
GEFT3	-0.033	0.012	-0.035	0.055	0.077	-0.102	0.284	0.013
HPT1	0.009	-0.008	-0.019	0.030	0.037	-0.005	0.013	0.162
HPT2	-0.007	0.006	0.014	-0.022	-0.027	0.003	-0.009	-0.118
VSAT	0.168	0.251	-0.053	0.084	0.103	-0.007	0.020	-0.027
NS1	0.194	0.004	-0.013	0.001	0.183	0.010	-0.027	-0.019
NS2	0.010	-0.006	-0.006	0.011	-0.002	-0.002	0.005	0.081
DR1	0.177	0.128	-0.026	0.028	0.157	0.064	-0.178	-0.014
DR2	0.101	0.086	-0.041	0.059	0.130	0.028	-0.077	-0.002
LCIP	0.258	0.117	0.017	-0.005	-0.205	0.023	-0.065	-0.015
LCIN	-0.053	-0.002	0.060	-0.085	-0.198	0.052	-0.145	-0.121
UNIT1	-0.024	-0.018	0.051	-0.102	0.063	0.006	-0.016	-0.075
UNIT2	0.021	-0.015	0.001	0.016	-0.140	-0.005	0.013	-0.005
UNIT3	0.108	-0.028	0.007	-0.009	-0.029	-0.009	0.026	0.026
UNIT4	0.075	-0.012	0.008	-0.002	-0.106	-0.016	0.045	0.013
FINAL	0.098	0.071	0.014	-0.024	-0.020	-0.006	0.016	0.008

FINAL RESIDUAL MATRIX FOR FEMALES

VARIATE	HPT2	VSAT	NS1	NS2	DR1	DR2	LCIP	LCIN
HSPC	-0.010	0.066	-0.107	-0.067	-0.027	0.058	-0.271	-0.091
HSCA	-0.018	-0.053	0.023	-0.088	-0.136	-0.184	0.089	0.101
HSPS	0.029	0.014	0.051	0.155	0.182	0.177	0.095	-0.053
QSAT	0.025	0.273	0.044	0.142	0.222	0.199	0.034	0.127
ALG	-0.022	-0.061	-0.033	-0.066	-0.009	-0.007	-0.047	-0.169
TRIG	0.014	-0.200	0.012	-0.037	-0.242	-0.219	0.052	0.184
SMDP	0.005	0.201	0.031	0.059	0.055	0.101	0.072	0.015
SMDN	0.004	0.163	0.025	0.048	0.044	0.082	0.058	0.012
PUMP	-0.011	-0.009	0.007	0.021	0.008	0.008	-0.001	-0.002
PUMN	0.085	0.068	-0.057	-0.157	-0.061	-0.059	0.009	0.019
RQMA	-0.021	-0.113	-0.051	0.052	-0.005	-0.003	-0.250	-0.027
RQPS	0.004	0.022	0.010	-0.010	0.001	0.001	0.050	0.005
AIKP	0.006	-0.082	-0.005	0.021	-0.070	-0.048	-0.004	-0.001
AIKN	0.054	-0.065	-0.032	-0.007	-0.068	-0.053	0.063	0.079
CLMP	0.038	0.005	-0.011	0.081	-0.092	-0.040	0.057	0.014
CLMN	0.045	-0.009	-0.040	0.003	-0.065	-0.065	0.130	0.050
EPMP	-0.007	0.168	0.194	0.010	0.177	0.101	0.258	-0.053
EPMN	0.006	0.251	0.004	-0.006	0.128	0.086	0.117	-0.002
CR1	0.014	-0.053	-0.013	-0.006	-0.026	-0.041	0.017	0.060
CR2	-0.022	0.084	0.001	0.011	0.028	0.059	-0.005	-0.085
PSVR	-0.027	0.103	0.183	-0.002	0.157	0.130	-0.205	-0.198
GEPT2	0.003	-0.007	0.010	-0.002	0.064	0.028	0.023	0.052
GEPT3	-0.009	0.020	-0.027	0.005	-0.178	-0.077	-0.065	-0.145
HPT1	-0.118	-0.027	-0.019	0.081	-0.014	-0.002	-0.015	-0.121
HPT2	0.086	0.020	0.014	-0.059	0.010	0.001	0.011	0.088
VSAT	0.020	0.899	0.170	0.290	0.346	0.328	0.046	0.131
NS1	0.014	0.170	0.853	0.253	0.102	0.068	0.380	0.089
NS2	-0.059	0.290	0.253	0.810	0.101	0.052	0.244	0.246
DR1	0.010	0.346	0.102	0.101	0.912	0.573	0.124	0.098
DR2	0.001	0.328	0.068	0.052	0.573	0.765	-0.020	-0.106
LCIP	0.011	0.046	0.380	0.244	0.124	-0.020	0.839	0.175
LCIN	0.088	0.131	0.089	0.246	0.098	-0.106	0.175	0.754
UNIT1	0.055	-0.070	0.020	-0.117	-0.144	-0.013	0.049	0.246
UNIT2	0.004	-0.035	0.116	0.071	-0.033	0.067	0.114	0.160
UNIT3	-0.019	-0.067	0.057	-0.027	-0.175	-0.118	0.092	0.125
UNIT4	-0.009	-0.045	0.059	0.072	-0.247	-0.025	0.186	0.080
FINAL	-0.006	0.060	0.091	0.040	-0.082	0.016	0.110	-0.028

FINAL RESIDUAL MATRIX FOR FEMALES

VARIATE	UNIT1	UNIT2	UNIT3	UNIT4	FINAL
HSPC	-0.148	-0.037	0.068	0.010	-0.066
HSCA	0.197	0.015	0.050	-0.018	0.075
HSPS	-0.126	0.010	-0.111	0.014	-0.041
QSAT	-0.023	-0.051	-0.122	-0.101	0.011
ALG	0.019	-0.003	0.057	0.029	0.037
TRIG	-0.010	0.065	0.031	0.062	-0.085
SMDP	-0.059	0.106	-0.020	-0.076	0.004
SMDN	-0.048	0.086	-0.016	-0.062	0.003
PUMP	-0.004	-0.002	0.017	0.016	0.008
PUMN	0.028	0.012	-0.129	-0.124	-0.060
RQMA	0.057	0.025	0.003	-0.070	-0.014
RQPS	-0.011	-0.005	-0.001	0.014	0.003
AIKP	0.034	-0.019	-0.002	0.015	-0.001
AIKN	0.078	0.055	-0.008	0.007	0.074
CLMP	0.080	-0.077	-0.008	0.017	0.062
CLMN	0.095	0.012	-0.047	0.022	0.096
EFMP	-0.024	0.021	0.108	0.075	0.098
EFMN	-0.018	-0.015	-0.028	-0.012	0.071
CR1	0.051	0.001	0.007	0.008	0.014
CR2	-0.102	0.016	-0.009	-0.002	-0.024
PSVR	0.063	-0.140	-0.029	-0.106	-0.020
GEFT2	0.006	-0.005	-0.009	-0.016	-0.006
GEFT3	-0.016	0.013	0.026	0.045	0.016
HPT1	-0.075	-0.005	0.026	0.013	0.008
HPT2	0.055	0.004	-0.019	-0.009	-0.006
VSAT	-0.070	-0.035	-0.067	-0.045	0.060
NS1	0.020	0.116	0.057	0.059	0.091
NS2	-0.117	0.071	-0.027	0.072	0.040
DR1	-0.144	-0.033	-0.175	-0.247	-0.082
DR2	-0.013	0.067	-0.118	-0.025	0.016
LCIP	0.049	0.114	0.092	0.186	0.110
LCIN	0.246	0.160	0.125	0.080	-0.028
UNIT1	0.734	0.285	0.351	0.308	0.290
UNIT2	0.285	0.689	0.438	0.412	0.345
UNIT3	0.351	0.438	0.708	0.532	0.419
UNIT4	0.308	0.412	0.532	0.634	0.377
FINAL	0.290	0.345	0.419	0.377	0.508

FACTOR THEORY CORRELATION MATRIX FOR FEMALES

VARIATE	HSPC	HSCA	HSPS	QSAT	ALG	TRIG	SMDP	SMDN
HSPC	0.520	0.428	0.401	0.097	0.010	0.096	0.095	0.060
HSCA	0.428	0.617	0.544	0.237	0.149	0.151	0.099	0.022
HSPS	0.401	0.544	0.612	0.223	0.179	0.161	0.110	0.089
QSAT	0.097	0.237	0.223	0.541	0.630	0.419	0.033	-0.026
ALG	0.010	0.149	0.179	0.630	0.820	0.545	0.013	0.010
TRIG	0.096	0.151	0.161	0.419	0.545	0.419	-0.024	0.044
SMDP	0.095	0.099	0.110	0.033	0.013	-0.024	0.156	-0.117
SMDN	0.060	0.022	0.089	-0.026	0.010	0.044	-0.117	0.445
PUMP	0.503	0.183	0.292	0.189	0.254	0.283	0.121	0.143
PUMN	0.322	0.120	0.242	0.224	0.298	0.246	0.118	0.174
RQMA	0.111	0.197	0.294	0.221	0.306	0.238	0.066	0.075
RQPS	0.005	0.113	0.299	0.202	0.341	0.278	0.110	0.017
AIKP	0.216	0.278	0.298	0.317	0.305	0.219	0.124	0.241
AIKN	0.040	0.213	0.264	0.343	0.367	0.230	0.091	0.159
CLMP	0.255	0.266	0.330	0.313	0.385	0.301	0.112	0.134
CLMN	0.095	0.240	0.283	0.313	0.375	0.275	0.072	0.140
EFMP	0.246	0.156	0.187	0.205	0.230	0.197	0.125	0.209
EFMN	0.213	0.096	0.157	0.146	0.163	0.129	0.091	0.334
CR1	-0.161	-0.232	-0.080	0.054	0.121	0.080	-0.064	-0.083
CR2	-0.080	-0.142	-0.055	0.165	0.235	0.173	-0.045	-0.117
PSVR	-0.013	0.025	0.084	0.175	0.216	0.151	-0.017	0.093
GEPT2	-0.064	0.004	0.138	0.247	0.189	-0.004	0.022	-0.023
GEPT3	-0.150	0.002	0.114	0.256	0.234	0.045	-0.007	-0.036
HPT1	-0.155	-0.014	0.148	0.141	0.259	0.035	0.104	0.018
HPT2	-0.081	-0.090	0.097	0.054	0.185	0.009	0.141	0.087
VSAT	0.011	0.036	0.035	0.114	0.154	0.088	-0.015	0.004
NS1	0.076	0.118	0.067	0.177	0.169	0.115	0.010	-0.134
NS2	0.094	0.073	0.165	0.062	0.088	0.097	-0.040	0.019
DR1	-0.012	0.034	0.045	0.073	0.055	0.044	-0.035	0.017
DR2	0.119	0.114	0.150	0.050	-0.006	-0.031	0.103	-0.063
LCIP	0.005	-0.069	-0.026	-0.005	0.060	0.061	0.010	0.115
LCIN	-0.077	-0.167	-0.109	-0.195	-0.120	-0.051	-0.056	0.090
UNIT1	0.101	0.008	0.080	0.112	0.223	0.212	-0.063	0.200
UNIT2	0.218	0.215	0.285	0.270	0.350	0.302	0.028	0.090
UNIT3	0.155	0.122	0.166	0.217	0.298	0.289	-0.053	0.049
UNIT4	0.234	0.271	0.333	0.327	0.375	0.319	0.015	0.027
FINAL	0.335	0.359	0.404	0.339	0.404	0.365	0.027	0.072

FACTOR THEORY CORRELATION MATRIX FOR FEMALES

VARIATE	PUMP	PUMN	RQMA	RQPS	AIKP	AIKN	CLMP	CLMN
HSPC	0.503	0.322	0.111	0.005	0.216	0.040	0.255	0.095
HSCA	0.183	0.120	0.197	0.113	0.278	0.213	0.266	0.240
HSPS	0.292	0.242	0.294	0.299	0.298	0.264	0.330	0.283
QSAT	0.189	0.224	0.221	0.202	0.317	0.343	0.313	0.313
ALG	0.254	0.298	0.306	0.341	0.305	0.367	0.385	0.375
TRIG	0.283	0.246	0.238	0.278	0.219	0.230	0.301	0.275
SMDP	0.121	0.118	0.066	0.110	0.124	0.091	0.112	0.072
SMDN	0.143	0.174	0.075	0.017	0.241	0.159	0.134	0.140
PUMP	0.994	0.743	0.269	0.327	0.306	0.075	0.438	0.161
PUMN	0.743	0.636	0.262	0.335	0.409	0.241	0.413	0.240
RQMA	0.269	0.262	0.325	0.505	0.265	0.283	0.304	0.307
RQPS	0.327	0.335	0.505	0.973	0.335	0.415	0.366	0.434
AIKP	0.306	0.409	0.265	0.335	0.902	0.758	0.516	0.588
AIKN	0.075	0.241	0.283	0.415	0.758	0.738	0.430	0.572
CLMP	0.438	0.413	0.304	0.366	0.516	0.430	0.481	0.429
CLMN	0.161	0.240	0.307	0.434	0.588	0.572	0.429	0.512
EFMP	0.515	0.506	0.239	0.340	0.684	0.500	0.451	0.417
EFMN	0.483	0.516	0.191	0.235	0.705	0.502	0.414	0.382
CR1	-0.144	-0.114	-0.044	-0.065	-0.063	0.063	0.063	0.070
CR2	-0.054	-0.056	-0.026	-0.084	0.004	0.092	0.131	0.114
PSVR	0.004	0.068	0.089	0.085	0.281	0.300	0.208	0.253
GEPT2	-0.135	0.040	-0.042	-0.158	0.125	0.207	-0.033	-0.003
GEPT3	-0.227	-0.037	0.026	0.011	0.105	0.238	-0.041	0.056
HPT1	-0.152	0.005	0.106	0.038	0.000	0.129	0.147	0.125
HPT2	0.066	0.168	0.100	0.038	0.093	0.130	0.236	0.143
VSAT	0.058	0.048	0.028	-0.017	-0.094	-0.076	-0.008	-0.049
NS1	0.042	0.004	0.005	-0.049	-0.074	-0.054	-0.007	-0.040
NS2	0.157	0.086	0.101	0.134	-0.127	-0.087	0.025	-0.030
DR1	-0.089	-0.050	0.006	-0.006	0.106	0.134	0.038	0.092
DR2	0.031	0.051	-0.001	-0.064	0.182	0.157	0.130	0.105
LCIP	0.143	0.133	0.061	0.083	0.152	0.108	0.161	0.133
LCIN	0.034	-0.023	-0.004	0.032	-0.221	-0.208	-0.049	-0.096
UNIT1	0.336	0.253	0.143	0.147	0.049	0.007	0.184	0.094
UNIT2	0.398	0.319	0.267	0.336	0.233	0.201	0.326	0.258
UNIT3	0.318	0.204	0.185	0.237	0.034	0.032	0.188	0.123
UNIT4	0.326	0.254	0.249	0.294	0.224	0.222	0.303	0.257
FINAL	0.470	0.342	0.302	0.337	0.213	0.172	0.356	0.260

FACTOR THEORY CORRELATION MATRIX FOR FEMALES

VARIATE	EFMP	EFMN	CR1	CR2	PSVR	GEPT2	GEPT3	HPT1
HSPC	0.246	0.213	-0.161	-0.080	-0.013	-0.064	-0.150	-0.155
HSCA	0.156	0.096	-0.232	-0.142	0.025	0.004	0.002	-0.014
HSPS	0.187	0.157	-0.080	-0.055	0.084	0.138	0.114	0.148
QSAT	0.205	0.146	0.054	0.165	0.175	0.247	0.256	0.141
ALG	0.230	0.163	0.121	0.235	0.216	0.189	0.234	0.259
TRIG	0.197	0.129	0.080	0.173	0.151	-0.004	0.045	0.035
SMDP	0.125	0.091	-0.064	-0.045	-0.017	0.022	-0.007	0.104
SMDN	0.209	0.334	-0.083	-0.117	0.093	-0.023	-0.036	0.018
PUMP	0.515	0.483	-0.144	-0.054	0.004	-0.135	-0.227	-0.152
PUMN	0.506	0.516	-0.114	-0.056	0.068	0.040	-0.037	0.005
RQMA	0.239	0.191	-0.044	-0.026	0.089	-0.042	0.026	0.106
RQPS	0.340	0.235	-0.065	-0.084	0.085	-0.158	0.011	0.038
AIKP	0.684	0.705	-0.063	0.004	0.281	0.125	0.105	0.000
AIKN	0.500	0.502	0.063	0.092	0.300	0.207	0.238	0.129
CLMP	0.451	0.414	0.063	0.131	0.208	-0.033	-0.041	0.147
CLMN	0.417	0.382	0.070	0.114	0.253	-0.003	0.056	0.125
EFMP	0.648	0.654	-0.169	-0.095	0.144	-0.075	-0.095	-0.106
EFMN	0.654	0.730	-0.183	-0.142	0.153	0.034	-0.026	-0.050
CR1	-0.169	-0.183	0.945	0.858	0.347	0.251	0.181	0.382
CR2	-0.095	-0.142	0.858	0.833	0.340	0.184	0.119	0.309
PSVR	0.144	0.153	0.347	0.340	0.251	0.141	0.124	0.181
GEPT2	-0.075	0.034	0.251	0.184	0.141	0.963	0.792	0.339
GEPT3	-0.095	-0.026	0.181	0.119	0.124	0.792	0.716	0.270
HPT1	-0.106	-0.050	0.382	0.309	0.181	0.339	0.270	0.838
HPT2	0.059	0.130	0.408	0.338	0.196	0.193	0.087	0.810
VSAT	-0.058	-0.053	-0.099	-0.075	-0.049	0.083	0.077	0.065
NS1	-0.072	-0.120	-0.043	0.014	-0.034	0.119	0.109	-0.042
NS2	-0.087	-0.099	0.094	0.069	0.003	0.106	0.098	0.031
DR1	0.006	0.007	0.183	0.173	0.118	0.132	0.125	0.017
DR2	0.080	0.079	0.252	0.243	0.134	0.206	0.114	0.197
LCIP	0.169	0.179	0.144	0.143	0.109	-0.162	-0.163	0.102
LCIN	-0.099	-0.086	0.093	0.044	-0.033	-0.292	-0.258	0.079
UNIT1	0.133	0.145	0.052	0.071	0.066	-0.128	-0.123	0.043
UNIT2	0.239	0.189	0.053	0.104	0.118	-0.038	-0.021	0.048
UNIT3	0.083	0.023	0.092	0.139	0.072	-0.082	-0.048	-0.073
UNIT4	0.173	0.108	0.147	0.199	0.153	0.097	0.101	0.034
FINAL	0.221	0.145	-0.005	0.077	0.097	-0.045	-0.028	-0.003

FACTOR THEORY CORRELATION MATRIX FOR FEMALES

VARIATE	HPT2	VSAT	NS1	NS2	DR1	DR2	LCIP	LCIN
HSPC	-0.081	0.011	0.076	0.094	-0.012	0.119	0.005	-0.077
HSCA	-0.090	0.036	0.118	0.073	0.034	0.114	-0.069	-0.167
HSPS	0.097	0.035	0.067	0.165	0.045	0.150	-0.026	-0.109
QSAT	0.054	0.114	0.177	0.062	0.073	0.050	-0.005	-0.195
ALG	0.185	0.154	0.169	0.088	0.055	-0.006	0.060	-0.120
TRIG	0.009	0.088	0.115	0.097	0.044	-0.031	0.061	-0.051
SMDP	0.141	-0.015	0.010	-0.040	-0.035	0.103	0.010	-0.056
SMDN	0.087	0.004	-0.134	0.019	0.017	-0.063	0.115	0.090
PUMP	0.066	0.058	0.042	0.157	-0.089	0.031	0.143	0.034
PUMN	0.168	0.048	0.004	0.086	-0.050	0.051	0.133	-0.023
RQMA	0.100	0.028	0.005	0.101	0.006	-0.001	0.061	-0.004
RQPS	0.038	-0.017	-0.049	0.134	-0.006	-0.064	0.083	0.032
AIKP	0.093	-0.094	-0.074	-0.127	0.106	0.182	0.152	-0.221
AIKN	0.130	-0.076	-0.054	-0.087	0.134	0.157	0.108	-0.208
CLMP	0.236	-0.008	-0.007	0.025	0.038	0.130	0.161	-0.049
CLMN	0.143	-0.049	-0.040	-0.030	0.092	0.105	0.133	-0.096
EFMP	0.059	-0.058	-0.072	-0.087	0.006	0.080	0.169	-0.099
EFMN	0.130	-0.053	-0.120	-0.099	0.007	0.079	0.179	-0.086
CR1	0.408	-0.099	-0.043	0.094	0.183	0.252	0.144	0.093
CR2	0.338	-0.075	0.014	0.069	0.173	0.243	0.143	0.044
PSVR	0.196	-0.049	-0.034	0.003	0.118	0.134	0.109	-0.033
GEFT2	0.193	0.083	0.119	0.106	0.132	0.206	-0.162	-0.292
GEFT3	0.087	0.077	0.109	0.098	0.125	0.114	-0.163	-0.258
HPT1	0.810	0.065	-0.042	0.031	0.017	0.197	0.102	0.079
HPT2	0.914	0.018	-0.119	-0.011	-0.017	0.228	0.213	0.157
VSAT	0.018	0.101	0.077	0.059	-0.034	-0.061	-0.047	-0.012
NS1	-0.119	0.077	0.147	0.059	0.006	-0.004	-0.096	-0.106
NS2	-0.011	0.059	0.059	0.190	0.014	-0.016	-0.040	0.032
DR1	-0.017	-0.034	0.006	0.014	0.088	0.069	0.001	-0.061
DR2	0.228	-0.061	-0.004	-0.016	0.069	0.235	0.037	-0.083
LCIP	0.213	-0.047	-0.096	-0.040	0.001	0.037	0.161	0.107
LCIN	0.157	-0.012	-0.106	0.032	-0.061	-0.083	0.107	0.246
UNIT1	0.113	0.059	-0.014	0.108	-0.020	-0.068	0.116	0.127
UNIT2	0.074	0.046	0.051	0.132	0.022	0.025	0.079	-0.003
UNIT3	-0.076	0.059	0.081	0.165	0.024	-0.049	0.037	0.033
UNIT4	0.007	0.044	0.103	0.166	0.074	0.073	0.025	-0.075
FINAL	-0.008	0.079	0.115	0.187	0.024	0.022	0.038	-0.035

FACTOR THEORY CORRELATION MATRIX FOR FEMALES

VARIATE	UNIT1	UNIT2	UNIT3	UNIT4	FINAL
HSPC	0.101	0.218	0.155	0.234	0.335
HSCA	0.008	0.215	0.122	0.271	0.359
HSPS	0.080	0.285	0.166	0.333	0.404
QSAT	0.112	0.270	0.217	0.327	0.339
ALG	0.223	0.350	0.298	0.375	0.404
TRIG	0.212	0.302	0.289	0.319	0.365
SMDP	-0.063	0.028	-0.053	0.015	0.027
SMDN	0.200	0.090	0.049	0.027	0.072
PUMP	0.336	0.398	0.318	0.326	0.470
PUMN	0.253	0.319	0.204	0.254	0.342
RQMA	0.143	0.267	0.185	0.249	0.302
RQPS	0.147	0.336	0.237	0.294	0.337
AIKP	0.049	0.233	0.034	0.224	0.213
AIKN	0.007	0.201	0.032	0.222	0.172
CLMP	0.184	0.326	0.188	0.303	0.356
CLMN	0.094	0.258	0.123	0.257	0.260
EFMP	0.133	0.239	0.083	0.173	0.221
EFMN	0.145	0.189	0.023	0.108	0.145
CR1	0.052	0.053	0.092	0.147	-0.005
CR2	0.071	0.104	0.139	0.199	0.077
PSVR	0.066	0.118	0.072	0.153	0.097
GEFT2	-0.128	-0.038	-0.082	0.097	-0.045
GEFT3	-0.123	-0.021	-0.048	0.101	-0.028
HPT1	0.043	0.048	-0.073	0.034	-0.003
HPT2	0.113	0.074	-0.076	0.007	-0.008
VSAT	0.059	0.046	0.059	0.044	0.079
NS1	-0.014	0.051	0.081	0.103	0.115
NS2	0.108	0.132	0.165	0.166	0.187
DR1	-0.020	0.022	0.024	0.074	0.024
DR2	-0.068	0.025	-0.049	0.073	0.022
LCIP	0.116	0.079	0.037	0.025	0.038
LCIN	0.127	-0.003	0.033	-0.075	-0.035
UNIT1	0.266	0.211	0.213	0.163	0.235
UNIT2	0.211	0.311	0.261	0.310	0.374
UNIT3	0.213	0.261	0.292	0.279	0.334
UNIT4	0.163	0.310	0.279	0.366	0.397
FINAL	0.235	0.374	0.334	0.397	0.492

FACTOR-SCORING COEFFICIENTS FOR FEMALES

VARIATE	AE	PCP	PAMP	PUM	PAP	ALM	SA	FI/FD	FC
HSPC	0.352	-0.097	0.017	-0.145	-0.023	0.068	0.081	0.031	0.008
HSCA	0.568	-0.157	0.028	-0.234	-0.037	0.109	0.130	0.051	0.013
HSPS	0.475	-0.131	0.023	-0.196	-0.031	0.091	0.109	0.042	0.011
QSAT	0.000	0.378	-0.005	-0.095	-0.127	0.048	-0.128	0.114	0.012
ALG	0.000	0.634	-0.008	-0.160	-0.213	0.081	-0.214	0.191	0.020
TRIG	0.000	0.322	-0.004	-0.081	-0.108	0.041	-0.109	0.097	0.010
SMDP	0.000	0.000	-0.945	0.080	-0.091	-0.261	-0.052	0.104	0.020
SMDN	0.000	0.000	1.165	-0.099	0.112	0.322	0.064	-0.128	-0.025
PUMP	0.000	0.000	0.000	1.040	-0.253	0.175	0.067	-0.270	0.015
PUMN	0.000	0.000	0.000	0.137	-0.033	0.023	0.009	-0.036	0.002
RQMA	0.000	0.000	0.000	0.000	0.207	0.033	0.021	-0.046	0.018
RQPS	0.000	0.000	0.000	0.000	1.046	0.168	0.108	-0.232	0.089
AIKP	0.000	0.000	0.000	0.000	0.000	-1.002	0.063	0.267	-0.005
AIKN	0.000	0.000	0.000	0.000	0.000	-0.253	0.016	0.068	-0.001
CLMP	0.000	0.000	0.000	0.000	0.000	0.198	-0.012	-0.053	0.001
CLMN	0.000	0.000	0.000	0.000	0.000	0.329	-0.021	-0.088	0.002
EFMP	0.000	0.000	0.000	0.000	0.000	0.019	-0.001	-0.005	0.000
EFMN	0.000	0.000	0.000	0.000	0.000	-0.398	0.025	0.106	-0.002
CR1	0.000	0.000	0.000	0.000	0.000	0.000	0.723	0.139	0.301
CR2	0.000	0.000	0.000	0.000	0.000	0.000	0.393	0.075	0.164
PSVR	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.009	0.021
GEFT2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.891	0.158
GEFT3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.321	0.057
HPT1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.519
HPT2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.714
VSAT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NS1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NS2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DR1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DR2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LCIP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LCIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FINAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

CORRELATION MATRIX FOR MALES

VARIATE	HSPC	HSCA	HSPS	QSAT	ALG	TRIG	SMDP	SMDN
HSPC	1.000	0.180	0.113	0.258	0.152	0.172	0.016	0.152
HSCA	0.180	1.000	0.249	0.297	0.293	0.227	0.043	0.019
HSPS	0.113	0.249	1.000	0.340	0.241	0.244	-0.197	-0.162
QSAT	0.258	0.297	0.340	1.000	0.494	0.237	-0.117	-0.070
ALG	0.152	0.293	0.241	0.494	1.000	0.474	-0.027	0.043
TRIG	0.172	0.227	0.244	0.237	0.474	1.000	0.066	0.179
SMDP	0.016	0.043	-0.197	-0.117	-0.027	0.066	1.000	0.523
SMDN	0.152	0.019	-0.162	-0.070	0.043	0.179	0.523	1.000
PUMP	0.294	0.282	0.210	0.372	0.363	0.244	0.036	0.224
PUMN	0.167	0.340	0.138	0.405	0.286	0.260	-0.059	0.305
RQMA	0.249	0.296	0.061	0.222	0.321	0.371	-0.075	0.187
RQPS	0.132	0.273	0.284	0.394	0.360	0.236	0.004	-0.012
AIKP	0.306	0.208	0.280	0.309	0.358	0.429	-0.132	0.066
AIKN	0.258	0.184	0.260	0.317	0.352	0.463	-0.149	0.063
CLMP	0.354	0.224	0.118	0.264	0.280	0.400	-0.167	0.105
CLMN	0.234	0.264	0.148	0.385	0.401	0.451	-0.105	0.093
EFMP	0.404	0.185	0.231	0.171	0.252	0.382	0.073	0.374
EFMN	0.192	0.085	0.169	0.047	0.059	0.209	0.034	0.377
CR1	-0.005	0.202	0.141	0.190	0.091	0.014	-0.050	0.054
CR2	0.195	0.212	0.183	0.233	0.135	0.161	-0.058	0.086
PSVR	-0.043	-0.025	0.095	0.257	0.066	0.142	-0.254	-0.033
GEPT2	0.071	0.110	0.023	0.229	0.104	0.123	-0.183	-0.001
GEPT3	0.007	0.109	0.088	0.342	0.153	0.093	-0.124	0.008
HPT1	-0.016	0.167	0.159	-0.035	-0.073	0.128	-0.063	0.085
HPT2	-0.026	0.050	0.136	-0.010	0.016	0.044	-0.098	-0.031
VSAT	0.047	-0.147	0.194	0.337	0.112	-0.055	0.057	-0.076
NS1	0.074	-0.035	0.054	0.303	0.175	0.086	-0.188	0.042
NS2	0.073	0.009	-0.129	0.123	0.105	0.152	-0.033	0.068
DR1	-0.013	0.002	0.192	0.460	0.324	0.154	-0.093	0.144
DR2	-0.005	0.136	0.115	0.357	0.245	0.228	-0.123	0.075
LCIP	0.223	-0.060	-0.140	0.157	0.074	0.327	0.016	0.150
LCIN	-0.040	0.123	0.030	0.123	0.099	-0.087	-0.189	-0.012
UNIT1	0.078	0.213	0.385	0.217	0.250	0.174	-0.024	0.059
UNIT2	0.145	0.226	0.297	0.296	0.357	0.193	-0.070	0.055
UNIT3	-0.018	0.172	0.294	0.107	0.213	0.108	-0.005	0.023
UNIT4	0.142	0.300	0.342	0.328	0.261	0.175	0.078	0.052
FINAL	0.037	0.353	0.321	0.454	0.507	0.393	0.063	0.061

CORRELATION MATRIX FOR MALES

VARIATE	PUMP	PUMN	RQMA	RQPS	AIKP	AIKN	CLMP	CLMN
HSPC	0.294	0.167	0.249	0.132	0.306	0.256	0.354	0.234
HSCA	0.282	0.340	0.296	0.273	0.208	0.184	0.224	0.264
HSPS	0.210	0.138	0.061	0.284	0.280	0.260	0.118	0.148
QSAT	0.372	0.405	0.222	0.394	0.309	0.317	0.264	0.385
ALG	0.363	0.286	0.321	0.360	0.358	0.352	0.280	0.401
TRIG	0.244	0.260	0.371	0.236	0.429	0.463	0.400	0.451
SMDP	0.036	-0.059	-0.075	0.004	-0.132	-0.149	-0.167	-0.105
SMDN	0.224	0.305	0.187	-0.012	0.066	0.063	0.105	0.093
PUMP	1.000	0.804	0.390	0.481	0.603	0.644	0.641	0.619
PUMN	0.804	1.000	0.395	0.450	0.502	0.581	0.545	0.566
RQMA	0.390	0.395	1.000	0.371	0.386	0.377	0.440	0.441
RQPS	0.481	0.450	0.371	1.000	0.168	0.226	0.186	0.256
AIKP	0.603	0.502	0.386	0.168	1.000	0.863	0.794	0.795
AIKN	0.644	0.581	0.377	0.226	0.863	1.000	0.792	0.892
CLMP	0.641	0.545	0.440	0.186	0.794	0.792	1.000	0.805
CLMN	0.619	0.566	0.441	0.256	0.795	0.892	0.805	1.000
EFMP	0.638	0.595	0.241	0.164	0.710	0.644	0.651	0.570
EFMN	0.518	0.614	0.178	0.154	0.669	0.645	0.551	0.593
CR1	0.081	0.200	-0.074	0.158	0.029	0.040	0.083	0.098
CR2	0.212	0.245	0.001	0.229	0.148	0.135	0.185	0.167
PSVR	0.023	0.142	0.097	0.076	0.082	0.139	0.146	0.181
GEFT2	0.095	0.123	0.140	0.119	-0.140	-0.025	0.133	0.021
GEFT3	0.058	0.100	0.197	0.240	0.048	0.102	0.161	0.153
HPT1	0.130	0.135	-0.093	0.022	0.022	-0.020	0.125	-0.072
HPT2	0.007	-0.042	-0.110	-0.035	-0.037	-0.033	0.040	-0.081
VSAT	-0.036	-0.087	-0.070	0.023	-0.086	-0.071	-0.157	-0.209
NS1	0.119	0.280	0.020	-0.034	0.086	0.122	0.077	0.097
NS2	-0.109	0.022	-0.049	-0.141	-0.070	-0.118	0.059	-0.071
DR1	0.189	0.243	0.142	0.028	0.103	0.118	0.086	0.051
DR2	0.282	0.348	0.148	0.167	0.194	0.189	0.230	0.152
LCIP	0.227	0.294	0.063	0.015	0.360	0.330	0.391	0.316
LCIN	-0.134	0.048	0.104	0.013	-0.075	-0.105	0.056	0.081
UNIT1	0.296	0.233	0.254	0.348	0.121	0.181	0.197	0.219
UNIT2	0.389	0.314	0.252	0.496	0.187	0.211	0.150	0.237
UNIT3	0.277	0.177	0.063	0.334	0.259	0.331	0.210	0.298
UNIT4	0.382	0.280	0.048	0.459	0.206	0.297	0.158	0.299
FINAL	0.480	0.433	0.203	0.466	0.370	0.413	0.220	0.423

CORRELATION MATRIX FOR MALES

VARIATE	EFMP	EFMN	CR1	CR2	PSVR	GEFT2	GEFT3	HPT1
HSPC	0.404	0.192	-0.005	0.195	-0.043	0.071	0.007	-0.016
HSCA	0.185	0.085	0.202	0.212	-0.025	0.110	0.109	0.167
HSPS	0.231	0.169	0.141	0.183	0.095	0.023	0.088	0.159
QSAT	0.171	0.047	0.190	0.233	0.257	0.229	0.342	-0.035
ALG	0.252	0.059	0.091	0.135	0.066	0.104	0.153	-0.073
TRIG	0.382	0.209	0.014	0.161	0.142	0.123	0.093	0.128
SMDP	0.073	0.034	-0.050	-0.058	-0.254	-0.183	-0.124	-0.063
SMDN	0.374	0.377	0.054	0.086	-0.033	-0.001	0.008	0.085
PUMP	0.638	0.518	0.081	0.212	0.023	0.095	0.058	0.130
PUMN	0.595	0.614	0.200	0.245	0.142	0.123	0.100	0.135
RQMA	0.241	0.178	-0.074	0.001	0.097	0.140	0.197	-0.093
RQPS	0.164	0.154	0.158	0.229	0.076	0.119	0.240	0.022
AIKP	0.710	0.669	0.029	0.148	0.082	-0.140	0.048	0.022
AIKN	0.644	0.645	0.040	0.135	0.139	-0.025	0.102	-0.020
CLMP	0.651	0.551	0.083	0.185	0.146	0.133	0.161	0.125
CLMN	0.570	0.593	0.098	0.167	0.181	0.021	0.153	-0.072
EFMP	1.000	0.811	0.085	0.230	-0.077	0.019	-0.004	0.145
EFMN	0.811	1.000	0.122	0.093	-0.082	-0.113	-0.058	0.128
CR1	0.085	0.122	1.000	0.767	0.186	0.403	0.293	0.334
CR2	0.230	0.093	0.767	1.000	0.153	0.469	0.396	0.402
PSVR	-0.077	-0.082	0.186	0.153	1.000	0.399	0.346	0.113
GEFT2	0.019	-0.113	0.403	0.469	0.399	1.000	0.595	0.336
GEFT3	-0.004	-0.058	0.293	0.396	0.346	0.595	1.000	0.266
HPT1	0.145	0.128	0.334	0.402	0.113	0.336	0.266	1.000
HPT2	0.049	-0.007	0.204	0.287	0.028	0.332	0.282	0.714
VSAT	-0.101	-0.252	-0.034	0.029	0.010	0.079	0.131	-0.026
NS1	0.070	0.130	-0.039	-0.075	0.090	-0.106	0.052	-0.090
NS2	0.019	-0.101	0.200	0.155	0.019	0.194	0.231	0.089
DR1	0.084	-0.096	0.195	0.124	0.250	0.243	0.223	0.001
DR2	0.176	0.114	0.223	0.125	0.197	0.231	0.157	0.171
LCIP	0.379	0.272	0.267	0.340	0.213	0.077	-0.165	0.060
LCIN	-0.126	-0.003	0.332	0.193	0.217	0.253	0.141	0.172
UNIT1	0.228	0.230	0.105	0.074	-0.163	0.019	0.099	0.028
UNIT2	0.173	0.189	0.094	0.170	-0.073	0.110	0.132	0.023
UNIT3	0.199	0.286	0.163	0.184	-0.040	0.020	0.127	0.094
UNIT4	0.241	0.267	0.082	0.149	-0.098	-0.017	0.118	0.098
FINAL	0.351	0.307	0.099	0.201	-0.061	0.008	0.098	-0.040

CORRELATION MATRIX FOR MALES

VARIATE	HPT2	VSAT	NS1	NS2	DR1	DR2	LCIP	LCIN
HSPC	-0.026	0.047	0.074	0.073	-0.013	-0.005	0.223	-0.040
HSCA	0.050	-0.147	-0.035	0.009	0.002	0.136	-0.060	0.123
HSPS	0.136	0.194	0.054	-0.129	0.192	0.115	-0.140	0.030
OSAT	-0.010	0.337	0.303	0.123	0.460	0.357	0.157	0.123
ALG	0.016	0.112	0.175	0.105	0.324	0.245	0.074	0.099
TRIG	0.044	-0.055	0.086	0.152	0.154	0.228	0.327	-0.087
SMDP	-0.098	0.057	-0.188	-0.033	-0.093	-0.123	0.016	-0.189
SMDN	-0.031	-0.076	0.042	0.068	0.144	0.075	0.150	-0.012
PUMP	0.007	-0.036	0.119	-0.109	0.189	0.282	0.227	-0.134
PUMN	-0.042	-0.087	0.280	0.022	0.243	0.348	0.294	0.048
RQMA	-0.110	-0.070	0.020	-0.049	0.142	0.148	0.063	0.104
RQPS	-0.035	0.023	-0.034	-0.141	0.028	0.167	0.015	0.013
AIKP	-0.037	-0.086	0.086	-0.070	0.103	0.194	0.360	-0.075
AIKN	-0.033	-0.071	0.122	-0.118	0.118	0.189	0.330	-0.105
CLMP	0.040	-0.157	0.077	0.059	0.086	0.230	0.391	0.056
CLMN	-0.081	-0.209	0.097	-0.071	0.051	0.152	0.316	0.081
EFMP	0.049	-0.101	0.070	0.019	0.084	0.176	0.379	-0.126
EFMN	-0.007	-0.252	0.130	-0.101	-0.096	0.114	0.272	-0.003
CR1	0.204	-0.034	-0.039	0.200	0.195	0.223	0.267	0.332
CR2	0.287	0.029	-0.075	0.155	0.124	0.125	0.340	0.193
PSVR	0.028	0.010	0.090	0.019	0.250	0.197	0.213	0.217
GEFT2	0.332	0.079	-0.106	0.194	0.243	0.231	0.077	0.253
GEFT3	0.282	0.131	0.052	0.231	0.223	0.157	-0.165	0.141
HPT1	0.714	-0.026	-0.090	0.089	0.001	0.171	0.060	0.172
HPT2	1.000	0.128	-0.170	0.162	-0.048	0.047	0.008	0.086
VSAT	0.128	1.000	0.210	0.075	0.371	0.261	-0.191	-0.225
NS1	-0.170	0.210	1.000	0.379	0.259	0.390	0.163	-0.110
NS2	0.162	0.075	0.379	1.000	0.313	0.326	0.261	-0.108
DR1	-0.048	0.371	0.259	0.313	1.000	0.618	0.093	-0.191
DR2	0.047	0.261	0.390	0.326	0.618	1.000	0.187	-0.075
LCIP	0.008	-0.191	0.163	0.261	0.093	0.187	1.000	-0.004
LCIN	0.086	-0.225	-0.110	-0.108	-0.191	-0.075	-0.004	1.000
UNIT1	0.095	0.116	0.156	0.173	0.026	0.207	-0.015	0.056
UNIT2	0.047	0.080	0.023	-0.076	0.080	0.346	-0.086	-0.057
UNIT3	0.060	0.075	-0.005	-0.013	-0.047	0.254	0.036	-0.047
UNIT4	0.051	0.109	0.098	-0.137	-0.030	0.217	-0.009	-0.123
FINAL	0.023	0.092	0.079	-0.041	0.128	0.317	0.095	-0.051

CORRELATION MATRIX FOR MALES

VARIATE	UNIT1	UNIT2	UNIT3	UNIT4	FINAL
HSPC	0.078	0.145	-0.018	0.142	0.037
HSCA	0.213	0.226	0.172	0.300	0.353
HSPS	0.385	0.297	0.294	0.342	0.321
QSAT	0.217	0.296	0.107	0.328	0.454
ALG	0.250	0.357	0.213	0.261	0.507
TRIG	0.174	0.193	0.108	0.175	0.393
SMDP	-0.024	-0.070	-0.005	0.078	0.063
SMDN	0.059	0.055	0.023	0.052	0.061
PUMP	0.296	0.389	0.277	0.382	0.480
PUMN	0.233	0.314	0.177	0.280	0.433
RQMA	0.254	0.252	0.063	0.048	0.203
RQPS	0.348	0.496	0.334	0.459	0.466
AIKP	0.121	0.187	0.259	0.206	0.370
AIKN	0.181	0.211	0.331	0.297	0.413
CLMP	0.197	0.150	0.210	0.158	0.220
CLMN	0.219	0.237	0.298	0.299	0.423
EFMP	0.228	0.173	0.199	0.241	0.351
EFMN	0.230	0.189	0.286	0.267	0.307
CR1	0.105	0.094	0.163	0.082	0.099
CR2	0.074	0.170	0.184	0.149	0.201
PSVR	-0.163	-0.073	-0.040	-0.098	-0.061
GEFT2	0.019	0.110	0.020	-0.017	0.008
GEFT3	0.099	0.132	0.127	0.118	0.098
HPT1	0.028	0.023	0.094	0.098	-0.040
HPT2	0.095	0.047	0.060	0.051	0.023
VSAT	0.116	0.080	0.075	0.109	0.092
NS1	0.156	0.023	-0.005	0.098	0.079
NS2	0.173	-0.076	-0.013	-0.137	-0.041
DR1	0.026	0.080	-0.047	-0.030	0.128
DR2	0.207	0.346	0.254	0.217	0.317
LCIP	-0.015	-0.086	0.036	-0.009	0.095
LCIN	0.056	-0.057	-0.047	-0.123	-0.051
UNIT1	1.000	0.573	0.668	0.556	0.571
UNIT2	0.573	1.000	0.663	0.655	0.686
UNIT3	0.668	0.663	1.000	0.701	0.667
UNIT4	0.556	0.655	0.701	1.000	0.692
FINAL	0.571	0.686	0.667	0.692	1.000

COMMUNALITIES AND DISTURBANCE TERMS FOR MALES

VARIATE	COMMUNALITY	DISTURBANCE
HSPC	0.132	0.932
HSCA	0.706	0.542
HSPS	0.645	0.596
OSAT	0.625	0.612
ALG	0.793	0.454
TRIG	0.601	0.631
SMDP	0.931	0.262
SMDN	0.681	0.564
PUMP	0.924	0.276
PUMN	0.893	0.326
RQMA	0.549	0.671
RQPS	0.684	0.562
AIKP	0.775	0.475
AIKN	0.816	0.428
CLMP	0.577	0.651
CLMN	0.769	0.481
EFMP	0.704	0.544
EFMN	0.893	0.326
CR1	0.420	0.761
CR2	0.417	0.763
PSVR	0.851	0.386
GEFT2	0.749	0.501
GEFT3	0.887	0.336
HPT1	0.978	0.147
HPT2	0.423	0.760
VSAT	0.110	0.943
NS1	0.128	0.934
NS2	0.138	0.929
DR1	0.292	0.841
DR2	0.225	0.881
LCIP	0.347	0.808
LCIN	0.147	0.924
UNIT1	0.220	0.883
UNIT2	0.292	0.842
UNIT3	0.233	0.876
UNIT4	0.393	0.779
FINAL	0.520	0.693

FACTOR STRUCTURE MATRIX FOR MALES

VARIATE	AE	PCP	PAMF	PUM	FAP	ALM	SA	FI/FD	FC
HSPC	0.252	0.145	0.085	0.122	-0.128	0.035	0.064	0.026	0.051
HSCA	0.812	-0.018	0.117	0.048	-0.098	-0.137	0.019	0.028	0.010
HSPS	0.764	0.003	-0.138	-0.066	0.123	0.147	-0.028	-0.034	-0.017
QSAT	0.413	0.613	-0.102	0.097	0.112	-0.102	-0.104	0.077	0.138
ALG	0.344	0.812	-0.007	-0.031	0.012	-0.039	0.099	-0.042	0.037
TRIG	0.304	0.638	0.117	-0.060	-0.136	0.160	-0.026	-0.025	-0.197
SMDP	-0.088	0.005	0.949	-0.097	0.084	-0.027	0.060	-0.022	0.031
SMDN	-0.073	0.105	0.750	0.209	-0.180	0.058	-0.129	0.048	-0.067
PUMP	0.329	0.306	0.126	0.837	0.014	-0.021	0.070	0.010	-0.004
PUMN	0.315	0.291	0.081	0.834	-0.017	0.024	-0.083	-0.012	0.005
RQMA	0.246	0.312	0.019	0.260	-0.527	-0.096	0.023	0.120	0.148
RQPS	0.355	0.298	0.020	0.312	0.582	-0.081	0.019	0.101	0.124
AIKP	0.323	0.356	-0.063	0.422	-0.251	0.543	0.006	-0.052	-0.035
AIKN	0.292	0.387	-0.081	0.496	-0.189	0.538	-0.032	0.023	0.053
CLMP	0.240	0.321	-0.082	0.517	-0.272	0.228	-0.063	0.092	-0.060
CLMN	0.276	0.448	-0.040	0.450	-0.208	0.471	-0.092	0.034	0.115
EFMP	0.286	0.234	0.207	0.520	-0.136	0.464	0.056	0.073	-0.110
EFMN	0.169	0.056	0.175	0.566	-0.075	0.700	0.009	0.047	-0.116
CR1	0.215	0.033	0.000	0.067	0.176	0.008	-0.555	0.110	-0.131
CR2	0.260	0.115	0.005	0.129	0.169	-0.031	-0.438	0.255	-0.182
PSVR	0.038	0.191	-0.212	0.036	-0.020	-0.073	-0.866	-0.077	0.077
GEFT2	0.090	0.167	-0.140	0.052	-0.022	-0.303	-0.451	0.627	-0.042
GEFT3	0.123	0.215	-0.090	-0.021	0.050	-0.094	-0.367	0.819	0.028
HPT1	0.202	-0.106	0.005	0.118	0.060	-0.102	-0.237	0.240	-0.886
HPT2	0.112	-0.033	-0.075	-0.040	0.045	-0.062	-0.102	0.318	-0.533
VSAT	0.023	0.178	0.011	-0.145	0.083	-0.198	0.043	0.076	0.059
NS1	0.014	0.262	-0.140	0.149	-0.074	-0.024	0.028	-0.097	0.032
NS2	-0.066	0.211	-0.016	-0.107	-0.086	-0.186	-0.073	0.163	-0.060
DR1	0.114	0.394	-0.026	0.074	-0.127	-0.246	-0.194	0.026	0.054
DR2	0.156	0.313	-0.067	0.209	-0.012	-0.129	-0.150	0.023	-0.118
LCIP	-0.107	0.302	0.043	0.236	-0.054	0.156	-0.281	-0.264	-0.103
LCIN	0.096	0.027	-0.142	-0.089	-0.079	-0.063	-0.293	0.039	-0.106
UNIT1	0.372	0.122	0.032	0.128	0.062	0.024	0.176	0.104	0.056
UNIT2	0.333	0.247	-0.013	0.209	0.202	-0.003	0.134	0.114	0.063
UNIT3	0.285	0.070	0.028	0.138	0.218	0.256	0.011	0.116	-0.017
UNIT4	0.408	0.161	0.110	0.172	0.328	0.157	0.130	0.096	-0.019
FINAL	0.423	0.440	0.091	0.216	0.192	0.163	0.138	0.024	0.096

SQUARED STRUCTURE COEFFICIENTS FOR MALES

VARIATE	AS	PCP	PAMP	PUM	PAP	ALM	SA	FI/FD	FC
HSPC	0.063	0.021	0.007	0.015	0.017	0.001	0.004	0.001	0.003
HSCA	0.660	0.000	0.014	0.002	0.010	0.019	0.000	0.001	0.000
HSPS	0.583	0.000	0.019	0.004	0.015	0.022	0.001	0.001	0.000
QSAT	0.170	0.376	0.010	0.009	0.013	0.010	0.011	0.006	0.019
ALG	0.119	0.659	0.000	0.001	0.000	0.001	0.010	0.002	0.001
TRIG	0.093	0.407	0.014	0.004	0.018	0.026	0.001	0.001	0.039
SMDP	0.008	0.000	0.901	0.009	0.007	0.001	0.004	0.000	0.001
SMDN	0.005	0.011	0.562	0.044	0.032	0.003	0.017	0.002	0.004
PUMP	0.108	0.094	0.016	0.700	0.000	0.000	0.005	0.000	0.000
PUMN	0.099	0.085	0.007	0.695	0.000	0.001	0.007	0.000	0.000
ROMA	0.061	0.097	0.000	0.068	0.278	0.009	0.001	0.014	0.022
ROPS	0.126	0.089	0.000	0.098	0.339	0.007	0.000	0.010	0.015
AIKP	0.104	0.127	0.004	0.178	0.063	0.295	0.000	0.003	0.001
AIKN	0.085	0.149	0.007	0.246	0.036	0.289	0.001	0.001	0.003
CLMP	0.058	0.103	0.007	0.267	0.074	0.052	0.004	0.008	0.004
CLMN	0.076	0.200	0.002	0.203	0.043	0.222	0.008	0.001	0.013
EFMP	0.082	0.055	0.043	0.270	0.018	0.216	0.003	0.005	0.012
EFMN	0.029	0.003	0.031	0.320	0.006	0.490	0.000	0.002	0.013
CR1	0.046	0.001	0.000	0.005	0.031	0.000	0.309	0.012	0.017
CR2	0.068	0.013	0.000	0.017	0.029	0.001	0.192	0.065	0.033
PSVR	0.001	0.037	0.045	0.001	0.000	0.005	0.749	0.006	0.006
GEPT2	0.008	0.028	0.019	0.003	0.000	0.092	0.203	0.394	0.002
GEPT3	0.015	0.046	0.008	0.000	0.002	0.009	0.135	0.670	0.001
HPT1	0.041	0.011	0.000	0.014	0.004	0.011	0.056	0.057	0.785
HPT2	0.012	0.001	0.006	0.002	0.002	0.004	0.010	0.101	0.285
VSAT	0.001	0.032	0.000	0.021	0.007	0.039	0.002	0.006	0.003
NS1	0.000	0.069	0.019	0.022	0.006	0.001	0.001	0.009	0.001
NS2	0.004	0.044	0.000	0.011	0.007	0.035	0.005	0.026	0.004
DR1	0.013	0.156	0.001	0.005	0.016	0.060	0.038	0.001	0.003
DR2	0.024	0.098	0.004	0.044	0.000	0.017	0.022	0.001	0.014
LCIP	0.012	0.091	0.002	0.056	0.003	0.024	0.079	0.070	0.011
LCIN	0.009	0.001	0.020	0.008	0.006	0.004	0.086	0.001	0.011
UNIT1	0.139	0.015	0.001	0.016	0.004	0.001	0.031	0.011	0.003
UNIT2	0.111	0.061	0.000	0.044	0.041	0.000	0.018	0.013	0.004
UNIT3	0.081	0.005	0.001	0.019	0.048	0.066	0.000	0.013	0.000
UNIT4	0.167	0.026	0.012	0.030	0.107	0.025	0.017	0.009	0.000
FINAL	0.179	0.193	0.008	0.047	0.037	0.026	0.019	0.001	0.009

FINAL RESIDUAL MATRIX FOR MALES

VARIATE	HSPC	HSCA	HSPS	QSAT	ALG	TRIG	SMDP	SMDN
HSPC	0.868	-0.048	-0.046	0.077	-0.052	-0.011	-0.024	0.051
HSCA	-0.048	0.294	-0.318	-0.025	0.025	-0.008	0.011	-0.025
HSPS	-0.046	-0.318	0.355	0.018	-0.022	0.010	-0.010	0.021
QSAT	0.077	-0.025	0.018	0.375	-0.141	-0.204	0.014	-0.029
ALG	-0.052	0.025	-0.022	-0.141	0.207	-0.133	-0.007	0.016
TRIG	-0.011	-0.008	0.010	-0.204	-0.133	0.399	-0.005	0.010
SMDP	-0.024	0.011	-0.010	0.014	-0.007	-0.005	0.069	-0.148
SMDN	0.051	-0.025	0.021	-0.029	0.016	0.010	-0.148	0.319
PUMP	0.052	-0.037	0.035	-0.017	0.020	-0.010	0.019	-0.041
PUMN	-0.061	0.044	-0.041	0.020	-0.024	0.011	-0.023	0.049
RQMA	0.032	0.017	-0.022	-0.072	-0.009	0.088	-0.010	0.021
RQPS	0.027	0.014	-0.018	-0.060	-0.007	0.073	-0.008	0.018
AIKP	0.079	-0.009	0.001	0.003	-0.007	0.007	0.030	-0.065
AIKN	0.030	-0.006	0.003	-0.034	-0.022	0.065	0.031	-0.066
CLMP	0.152	0.023	-0.043	-0.043	-0.024	0.078	0.017	-0.037
CLMN	0.004	0.075	-0.083	-0.007	-0.017	0.030	0.032	-0.068
EFMP	0.184	-0.043	0.026	-0.042	0.003	0.041	-0.024	0.051
EFMN	0.027	-0.010	0.008	-0.001	0.007	-0.008	-0.033	0.071
CR1	-0.011	0.052	-0.056	0.007	0.055	-0.083	0.001	-0.002
CR2	0.150	0.011	-0.029	-0.019	0.013	0.003	-0.006	0.013
PSVR	-0.013	-0.023	0.027	-0.001	-0.025	0.035	0.000	-0.001
GEFT2	0.052	0.001	-0.007	-0.047	0.000	0.050	-0.002	0.005
GEFT3	-0.035	-0.001	0.005	0.032	0.000	-0.034	0.002	-0.003
HPT1	-0.001	-0.007	0.008	-0.002	0.008	-0.009	0.001	-0.001
HPT2	-0.004	-0.036	0.040	-0.012	0.043	-0.046	0.003	-0.007
VSAT	0.042	-0.179	0.192	0.195	-0.057	-0.128	0.018	-0.039
NS1	0.016	-0.041	0.044	0.120	-0.047	-0.062	-0.041	0.088
NS2	0.072	0.037	-0.049	0.008	-0.037	0.042	-0.023	0.049
DR1	-0.105	-0.128	0.153	0.121	-0.023	-0.096	-0.039	0.083
DR2	-0.091	-0.004	0.014	0.061	-0.042	-0.007	-0.017	0.037
LCIP	0.191	0.046	-0.072	0.025	-0.100	0.110	0.010	-0.021
LCIN	-0.030	0.056	-0.058	0.045	0.074	-0.149	-0.028	0.060
UNIT1	-0.061	-0.095	0.111	-0.023	0.011	0.009	-0.025	0.054
UNIT2	0.012	-0.036	0.038	-0.041	0.035	-0.005	-0.034	0.072
UNIT3	-0.103	-0.015	0.028	-0.068	0.074	-0.030	-0.003	0.006
UNIT4	0.012	-0.002	0.000	0.044	-0.010	-0.033	-0.003	0.007
FINAL	-0.163	0.033	-0.018	-0.007	-0.001	0.009	0.009	-0.020

FINAL RESIDUAL MATRIX FOR MALES

VARIATE	PUMP	PUMN	ROMA	ROPS	AIKP	AIKN	CLMP	CLMN
HSPC	0.052	-0.061	0.032	0.027	0.079	0.030	0.152	0.004
HSCA	-0.037	0.044	0.017	0.014	-0.009	-0.006	0.023	0.075
HSPS	0.035	-0.041	-0.022	-0.018	0.001	0.003	-0.043	-0.083
QSAT	-0.017	0.020	-0.072	-0.060	0.003	-0.034	-0.043	-0.007
ALG	0.020	-0.024	-0.009	-0.007	-0.007	-0.022	-0.024	-0.017
TRIG	-0.010	0.011	0.088	0.073	0.007	0.065	0.078	0.030
SMDP	0.019	-0.023	-0.010	-0.008	0.030	0.031	0.017	0.032
SMDN	-0.041	0.049	0.021	0.018	-0.065	-0.066	-0.037	-0.068
PUMP	0.076	-0.090	-0.003	-0.003	0.057	0.041	0.053	0.039
PUMN	-0.090	0.107	0.004	0.003	-0.067	-0.049	-0.063	-0.046
ROMA	-0.003	0.004	0.451	0.377	0.019	0.000	0.026	0.034
ROPS	-0.003	0.003	0.377	0.316	0.016	0.000	0.022	0.028
AIKP	0.057	-0.067	0.019	0.016	0.225	0.081	0.190	0.052
AIKN	0.041	-0.049	0.000	0.000	0.081	0.184	0.159	0.109
CLMP	0.053	-0.063	0.026	0.022	0.190	0.159	0.423	0.193
CLMN	0.039	-0.046	0.034	0.028	0.052	0.109	0.193	0.231
EFMP	0.018	-0.021	-0.062	-0.052	0.041	-0.040	0.103	-0.071
EFMN	-0.036	0.043	0.008	0.006	-0.034	-0.078	0.024	-0.059
CR1	-0.022	0.026	-0.042	-0.035	-0.036	-0.053	-0.021	-0.013
CR2	0.006	-0.008	-0.040	-0.034	0.037	-0.011	0.009	0.007
PSVR	0.008	-0.010	0.023	0.019	0.011	0.024	0.008	0.004
GEFT2	0.007	-0.009	-0.044	-0.037	-0.066	-0.021	-0.006	-0.027
GEFT3	-0.005	0.006	0.030	0.025	0.044	0.014	0.004	0.018
HPT1	0.005	-0.005	-0.011	-0.009	-0.001	0.004	-0.001	-0.001
HPT2	0.024	-0.028	-0.055	-0.046	-0.006	0.021	-0.003	-0.003
VSAT	0.013	-0.015	-0.087	-0.073	0.039	0.045	-0.077	-0.124
NS1	-0.073	0.087	-0.136	-0.114	-0.094	-0.068	-0.101	-0.099
NS2	-0.060	0.071	-0.143	-0.119	0.007	-0.046	0.057	-0.035
DR1	-0.017	0.021	-0.125	-0.105	-0.001	-0.006	-0.098	-0.127
DR2	-0.025	0.030	-0.042	-0.035	0.004	-0.019	-0.014	-0.071
LCIP	-0.008	0.009	-0.027	-0.023	0.076	0.040	0.152	0.017
LCIN	-0.062	0.073	0.069	0.057	-0.072	-0.096	0.023	0.074
UNIT1	0.012	-0.014	0.100	0.084	-0.085	-0.037	0.022	0.013
UNIT2	0.017	-0.020	0.119	0.100	-0.038	-0.048	-0.060	-0.015
UNIT3	0.043	-0.050	0.063	0.052	0.006	0.057	0.040	0.051
UNIT4	0.029	-0.035	0.026	0.022	-0.048	0.020	-0.019	0.047
FINAL	0.005	-0.005	0.000	0.000	-0.046	-0.033	-0.099	-0.020

FINAL RESIDUAL MATRIX FOR MALES

VARIATE	EFMP	EFMN	CR1	CR2	PSVR	GEFT2	GEFT3	HPT1
HSPC	0.184	0.027	-0.011	0.150	-0.013	0.052	-0.035	-0.001
HSCA	-0.043	-0.010	0.052	0.011	-0.023	0.001	-0.001	-0.007
HSPS	0.026	0.008	-0.056	-0.029	0.027	-0.007	0.005	0.008
QSAT	-0.042	-0.001	0.007	-0.019	-0.001	-0.047	0.032	-0.002
ALG	0.003	0.007	0.055	0.013	-0.025	0.000	0.000	0.008
TRIG	0.041	-0.008	-0.083	0.003	0.035	0.050	-0.034	-0.009
SMDP	-0.024	-0.033	0.001	-0.006	0.000	-0.002	0.002	0.001
SMDN	0.051	0.071	-0.002	0.013	-0.001	0.005	-0.003	-0.001
PUMP	0.018	-0.036	-0.022	0.006	0.008	0.007	-0.005	0.005
PUMN	-0.021	0.043	0.026	-0.008	-0.010	-0.009	0.006	-0.005
RQMA	-0.062	0.008	-0.042	-0.040	0.023	-0.044	0.030	-0.011
RQPS	-0.052	0.006	-0.035	-0.034	0.019	-0.037	0.025	-0.009
AIKP	0.041	-0.034	-0.036	0.037	0.011	-0.066	0.044	-0.001
AIKN	-0.040	-0.078	-0.053	-0.011	0.024	-0.021	0.014	0.004
CLMP	0.103	0.024	-0.021	0.009	0.008	-0.006	0.004	-0.001
CLMN	-0.071	-0.059	-0.013	0.007	0.004	-0.027	0.018	-0.001
EFMP	0.296	0.068	0.009	0.083	-0.014	0.069	-0.046	0.004
EFMN	0.068	0.107	0.038	-0.027	-0.013	0.038	-0.025	-0.003
CR1	0.009	0.038	0.580	0.373	-0.289	0.056	-0.037	0.003
CR2	0.083	-0.027	0.373	0.583	-0.227	0.049	-0.033	0.007
PSVR	-0.014	-0.013	-0.289	-0.227	0.149	-0.029	0.020	-0.002
GEFT2	0.069	0.038	0.056	0.049	-0.029	0.251	-0.168	0.006
GEFT3	-0.046	-0.025	-0.037	-0.033	0.020	-0.168	0.113	-0.004
HPT1	0.004	-0.003	0.003	0.007	-0.002	0.006	-0.004	0.022
HPT2	0.020	-0.017	0.015	0.035	-0.011	0.033	-0.022	0.112
VSAT	0.025	-0.038	-0.024	0.012	0.009	-0.027	0.018	0.024
NS1	-0.035	0.072	-0.017	-0.073	0.016	-0.112	0.075	-0.022
NS2	0.108	0.072	0.165	0.087	-0.080	-0.028	0.018	0.014
DR1	0.038	-0.006	0.074	-0.028	-0.028	-0.019	0.013	-0.011
DR2	0.015	0.039	0.067	-0.073	-0.019	0.019	-0.013	-0.009
LCIP	0.151	0.022	0.133	0.242	-0.085	0.111	-0.075	0.011
LCIN	-0.063	0.081	0.150	0.031	-0.067	0.044	-0.029	-0.007
UNIT1	0.006	0.070	0.095	-0.003	-0.040	-0.013	0.008	0.015
UNIT2	-0.066	0.022	0.035	0.035	-0.019	0.022	-0.015	0.005
UNIT3	-0.076	-0.019	0.040	0.027	-0.020	-0.006	0.004	0.000
UNIT4	-0.070	-0.021	-0.023	-0.020	0.012	-0.022	0.014	-0.001
FINAL	-0.053	-0.018	0.030	0.056	-0.020	0.003	-0.002	0.013

FINAL RESIDUAL MATRIX FOR MALES

VARIATE	HPT2	VSAT	NS1	NS2	DR1	DR2	LCIP	LCIN
HSPC	-0.004	0.042	0.016	0.072	-0.105	-0.091	0.191	-0.030
HSCA	-0.036	-0.179	-0.041	0.037	-0.128	-0.004	0.046	0.056
HSPS	0.040	0.192	0.044	-0.049	0.153	0.014	-0.072	-0.058
QSAT	-0.012	0.195	0.120	0.008	0.121	0.061	0.025	0.045
ALG	0.043	-0.057	-0.047	-0.037	-0.023	-0.042	-0.100	0.074
TRIG	-0.046	-0.128	-0.062	0.042	-0.096	-0.007	0.110	-0.149
SMDP	0.003	0.018	-0.041	-0.023	-0.039	-0.017	0.010	-0.028
SMDN	-0.007	-0.039	0.088	0.049	0.083	0.037	-0.021	0.060
PUMP	0.024	0.013	-0.073	-0.060	-0.017	-0.025	-0.008	-0.062
PUMN	-0.028	-0.015	0.087	0.071	0.021	0.030	0.009	0.073
RQMA	-0.055	-0.087	-0.136	-0.143	-0.125	-0.042	-0.027	0.069
RQPS	-0.046	-0.073	-0.114	-0.119	-0.105	-0.035	-0.023	0.057
AIKP	-0.006	0.039	-0.094	0.007	-0.001	0.004	0.076	-0.072
AIKN	0.021	0.045	-0.068	-0.048	-0.008	-0.019	0.040	-0.096
CLMP	-0.003	-0.077	-0.101	0.057	-0.098	-0.014	0.152	0.023
CLMN	-0.003	-0.124	-0.099	-0.035	-0.127	-0.071	0.017	0.074
EFMP	0.020	0.025	-0.035	0.108	0.038	0.015	0.151	-0.063
EFMN	-0.017	-0.038	0.072	0.072	-0.006	0.039	0.022	0.081
CR1	0.015	-0.024	-0.017	0.165	0.074	0.067	0.133	0.150
CR2	0.035	0.012	-0.073	0.087	-0.028	-0.073	0.242	0.031
PSVR	-0.011	0.009	0.016	-0.080	-0.028	-0.019	-0.085	-0.067
GEFT2	0.033	-0.027	-0.112	-0.028	-0.019	0.019	0.111	0.044
GEFT3	-0.022	0.018	0.075	0.018	0.013	-0.013	-0.075	-0.029
HPT1	0.112	0.024	-0.022	0.014	-0.011	-0.009	0.011	-0.007
HPT2	0.577	0.123	-0.115	0.072	-0.055	-0.049	0.056	-0.037
VSAT	0.123	0.890	0.192	-0.012	0.274	0.220	-0.135	-0.233
NS1	-0.115	0.192	0.872	0.348	0.130	0.272	0.041	-0.116
NS2	0.072	-0.012	0.348	0.862	0.173	0.245	0.257	-0.172
DR1	-0.055	0.274	0.130	0.173	0.708	0.403	-0.041	-0.286
DR2	-0.049	0.220	0.272	0.245	0.403	0.775	0.034	-0.155
LCIP	0.056	-0.135	0.041	0.257	-0.041	0.034	0.653	-0.052
LCIN	-0.037	-0.233	-0.116	-0.172	-0.286	-0.155	-0.052	0.853
UNIT1	0.079	0.085	0.113	0.194	-0.031	0.120	0.039	0.093
UNIT2	0.027	0.024	-0.059	-0.072	-0.027	0.199	-0.088	-0.021
UNIT3	0.000	0.100	-0.010	0.054	-0.026	0.193	0.015	-0.030
UNIT4	-0.006	0.087	0.074	-0.073	-0.046	0.113	-0.006	-0.068
FINAL	0.065	0.037	-0.049	-0.023	-0.022	0.129	-0.008	0.004

FINAL RESIDUAL MATRIX FOR MALES

VARIATE	UNIT1	UNIT2	UNIT3	UNIT4	FINAL
HSPC	-0.061	0.012	-0.103	0.012	-0.163
HSCA	-0.095	-0.036	-0.015	-0.002	0.033
HSPS	0.111	0.038	0.028	0.000	-0.018
QSAT	-0.023	-0.041	-0.068	0.044	-0.007
ALG	0.011	0.035	0.074	-0.010	-0.001
TRIG	0.009	-0.005	-0.030	-0.033	0.009
SMDP	-0.025	-0.034	-0.003	-0.003	0.009
SMDN	0.054	0.072	0.006	0.007	-0.020
PUMP	0.012	0.017	0.043	0.029	0.005
PUMN	-0.014	-0.020	-0.050	-0.035	-0.005
RQMA	0.100	0.119	0.063	0.026	0.000
RQPS	0.084	0.100	0.052	0.022	0.000
AIKP	-0.085	-0.038	0.006	-0.048	-0.046
AIKN	-0.037	-0.048	0.057	0.020	-0.033
CLMP	0.022	-0.060	0.040	-0.019	-0.099
CLMN	0.013	-0.015	0.051	0.047	-0.020
EFMP	0.006	-0.066	-0.076	-0.070	-0.053
EFMN	0.070	0.022	-0.019	-0.021	-0.018
CR1	0.095	0.035	0.040	-0.023	0.030
CR2	-0.003	0.035	0.027	-0.020	0.056
PSVR	-0.040	-0.019	-0.020	0.012	-0.020
GEFT2	-0.013	0.022	-0.006	-0.022	0.003
GEFT3	0.008	-0.015	0.004	0.014	-0.002
HPT1	0.015	0.005	0.000	-0.001	0.013
HPT2	0.079	0.027	0.000	-0.006	0.065
VSAT	0.085	0.024	0.100	0.087	0.037
NS1	0.113	-0.059	-0.010	0.074	-0.049
NS2	0.194	-0.072	0.054	-0.073	-0.023
DR1	-0.031	-0.027	-0.026	-0.046	-0.022
DR2	0.120	0.199	0.193	0.113	0.129
LCIP	0.039	-0.088	0.015	-0.006	-0.008
LCIN	0.093	-0.021	-0.030	-0.068	0.004
UNIT1	0.780	0.341	0.502	0.303	0.281
UNIT2	0.341	0.708	0.465	0.352	0.327
UNIT3	0.502	0.465	0.767	0.422	0.397
UNIT4	0.303	0.352	0.422	0.607	0.294
FINAL	0.281	0.327	0.397	0.294	0.480

FACTOR THEORY CORRELATION MATRIX FOR MALES

VARIATE	HSPC	HSCA	HSPS	QSAT	ALG	TRIG	SMDP	SMDN
HSPC	0.132	0.228	0.159	0.180	0.204	0.182	0.040	0.101
HSCA	0.228	0.706	0.567	0.322	0.268	0.235	0.031	0.044
HSPS	0.159	0.567	0.645	0.321	0.262	0.234	-0.187	-0.183
QSAT	0.180	0.322	0.321	0.625	0.635	0.441	-0.131	-0.040
ALG	0.204	0.268	0.262	0.635	0.793	0.607	-0.019	0.027
TRIG	0.182	0.235	0.234	0.441	0.607	0.601	0.071	0.169
SMDP	0.040	0.031	-0.187	-0.131	-0.019	0.071	0.931	0.671
SMDN	0.101	0.044	-0.183	-0.040	0.027	0.169	0.671	0.681
PUMP	0.242	0.319	0.176	0.389	0.343	0.254	0.017	0.265
PUMN	0.228	0.297	0.179	0.385	0.310	0.249	-0.037	0.257
RQMA	0.217	0.279	0.083	0.294	0.330	0.284	-0.065	0.166
RQPS	0.105	0.259	0.302	0.454	0.367	0.162	0.012	-0.030
AIKP	0.228	0.217	0.279	0.306	0.365	0.422	-0.162	0.131
AIKN	0.228	0.190	0.257	0.350	0.374	0.398	-0.180	0.129
CLMP	0.202	0.201	0.161	0.306	0.304	0.322	-0.184	0.142
CLMN	0.230	0.189	0.231	0.393	0.418	0.421	-0.137	0.162
EFMP	0.221	0.228	0.205	0.213	0.250	0.341	0.097	0.323
EFMN	0.165	0.095	0.161	0.048	0.052	0.218	0.067	0.306
CR1	0.006	0.150	0.196	0.182	0.036	0.097	-0.051	0.056
CR2	0.045	0.201	0.213	0.252	0.122	0.159	-0.052	0.072
PSVR	-0.029	-0.001	0.068	0.258	0.091	0.107	-0.254	-0.032
GEFT2	0.019	0.109	0.030	0.276	0.105	0.073	-0.180	-0.006
GEFT3	0.042	0.109	0.083	0.310	0.153	0.127	-0.126	0.011
HPT1	-0.015	0.174	0.152	-0.033	-0.082	0.137	-0.064	0.087
HPT2	-0.021	0.086	0.096	0.002	-0.027	0.090	-0.101	-0.024
VSAT	0.005	0.032	0.002	0.142	0.169	0.073	0.039	-0.037
NS1	0.057	0.006	0.010	0.183	0.222	0.148	-0.148	-0.045
NS2	0.001	-0.027	-0.080	0.115	0.142	0.110	-0.010	0.018
DR1	0.091	0.130	0.039	0.339	0.347	0.250	-0.054	0.060
DR2	0.087	0.139	0.101	0.297	0.287	0.235	-0.106	0.038
LCIP	0.032	-0.106	-0.068	0.132	0.173	0.217	0.006	0.171
LCIN	-0.010	0.067	0.088	0.078	0.025	0.063	-0.161	-0.072
UNIT1	0.139	0.308	0.273	0.240	0.238	0.165	0.001	0.005
UNIT2	0.133	0.262	0.259	0.337	0.322	0.198	-0.036	-0.017
UNIT3	0.085	0.187	0.265	0.175	0.139	0.138	-0.002	0.017
UNIT4	0.130	0.301	0.342	0.285	0.271	0.208	0.081	0.045
FINAL	0.200	0.320	0.339	0.462	0.508	0.384	0.053	0.081

FACTOR THEORY CORRELATION MATRIX FOR MALES

VARIATE	PUMP	PUMN	RQMA	RQPS	AIKP	AIKN	CLMP	CLMN
HSPC	0.242	0.228	0.217	0.105	0.228	0.228	0.202	0.230
HSCA	0.319	0.297	0.279	0.259	0.217	0.190	0.201	0.189
HSPS	0.176	0.179	0.083	0.302	0.279	0.257	0.161	0.231
OSAT	0.389	0.385	0.294	0.454	0.306	0.350	0.306	0.393
ALG	0.343	0.310	0.330	0.367	0.365	0.374	0.304	0.418
TRIG	0.254	0.249	0.284	0.162	0.422	0.398	0.322	0.421
SMDP	0.017	-0.037	-0.065	0.012	-0.162	-0.180	-0.184	-0.137
SMDN	0.265	0.257	0.166	-0.030	0.131	0.129	0.142	0.162
PUMP	0.924	0.894	0.393	0.484	0.546	0.603	0.588	0.580
PUMN	0.894	0.893	0.391	0.447	0.570	0.630	0.607	0.612
RQMA	0.393	0.391	0.549	-0.006	0.367	0.377	0.414	0.407
RQPS	0.484	0.447	-0.006	0.684	0.152	0.227	0.165	0.228
AIKP	0.546	0.570	0.367	0.152	0.775	0.782	0.604	0.743
AIKN	0.603	0.630	0.377	0.227	0.782	0.816	0.632	0.783
CLMP	0.588	0.607	0.414	0.165	0.604	0.632	0.577	0.612
CLMN	0.580	0.612	0.407	0.228	0.743	0.783	0.612	0.769
EFMP	0.620	0.616	0.303	0.216	0.668	0.684	0.548	0.641
EFMN	0.554	0.572	0.170	0.147	0.703	0.722	0.527	0.652
CR1	0.102	0.174	-0.032	0.193	0.066	0.093	0.104	0.111
CR2	0.206	0.253	0.041	0.263	0.111	0.146	0.175	0.160
PSVR	0.014	0.152	0.074	0.057	0.071	0.115	0.139	0.176
GEFT2	0.087	0.131	0.185	0.156	-0.074	-0.004	0.139	0.048
GEFT3	0.062	0.094	0.167	0.215	0.004	0.088	0.157	0.135
HPT1	0.126	0.141	-0.082	0.030	0.024	-0.024	0.126	-0.071
HPT2	-0.016	-0.014	-0.056	0.011	-0.031	-0.053	0.043	-0.079
VSAT	-0.049	-0.072	0.018	0.096	-0.125	-0.116	-0.080	-0.085
NS1	0.192	0.193	0.156	0.080	0.179	0.191	0.178	0.196
NS2	-0.049	-0.049	0.094	-0.022	-0.077	-0.070	0.002	-0.036
DR1	0.207	0.222	0.267	0.132	0.104	0.126	0.184	0.178
DR2	0.307	0.318	0.190	0.201	0.190	0.208	0.244	0.223
LCIP	0.235	0.285	0.090	0.038	0.284	0.291	0.240	0.300
LCIN	-0.072	-0.025	0.036	-0.044	-0.003	-0.009	0.033	0.007
UNIT1	0.284	0.246	0.153	0.264	0.207	0.218	0.176	0.206
UNIT2	0.372	0.334	0.133	0.397	0.225	0.259	0.211	0.252
UNIT3	0.234	0.228	0.000	0.282	0.252	0.274	0.170	0.247
UNIT4	0.353	0.314	0.021	0.437	0.254	0.277	0.178	0.252
FINAL	0.475	0.438	0.203	0.466	0.415	0.446	0.320	0.443

FACTOR THEORY CORRELATION MATRIX FOR MALES

VARIATE	EFMP	EFMN	CR1	CR2	PSVR	GEFT2	GEFT3	HPT1
HSPC	0.221	0.165	0.006	0.045	-0.029	0.019	0.042	-0.015
HSCA	0.228	0.095	0.150	0.201	-0.001	0.109	0.109	0.174
HSPS	0.205	0.161	0.196	0.213	0.068	0.030	0.083	0.152
QSAT	0.213	0.048	0.182	0.252	0.258	0.276	0.310	-0.033
ALG	0.250	0.052	0.036	0.122	0.091	0.105	0.153	-0.082
TRIG	0.341	0.218	0.097	0.159	0.107	0.073	0.127	0.137
SMDP	0.097	0.067	-0.051	-0.052	-0.254	-0.180	-0.126	-0.064
SMDN	0.303	0.306	0.056	0.072	-0.032	-0.006	0.011	0.087
PUMP	0.620	0.554	0.102	0.206	0.014	0.087	0.062	0.126
PUMN	0.616	0.572	0.174	0.253	0.152	0.131	0.094	0.141
RQMA	0.303	0.170	-0.032	0.041	0.074	0.185	0.167	-0.082
RQPS	0.216	0.147	0.193	0.263	0.057	0.156	0.215	0.030
AIKP	0.668	0.703	0.066	0.111	0.071	-0.074	0.004	0.024
AIKN	0.684	0.722	0.093	0.146	0.115	-0.004	0.088	-0.024
CLMP	0.548	0.527	0.104	0.175	0.139	0.139	0.157	0.126
CLMN	0.641	0.652	0.111	0.160	0.176	0.048	0.135	-0.071
EFMP	0.704	0.743	0.075	0.147	-0.063	-0.050	0.042	0.141
EFMN	0.743	0.893	0.084	0.119	-0.069	-0.151	-0.033	0.131
CR1	0.075	0.084	0.420	0.393	0.475	0.347	0.331	0.332
CR2	0.147	0.119	0.393	0.417	0.380	0.419	0.429	0.395
PSVR	-0.063	-0.069	0.475	0.380	0.851	0.428	0.327	0.115
GEFT2	-0.050	-0.151	0.347	0.419	0.428	0.749	0.764	0.330
GEFT3	0.042	-0.033	0.331	0.429	0.327	0.764	0.887	0.270
HPT1	0.141	0.131	0.332	0.395	0.115	0.330	0.270	0.978
HPT2	0.029	0.010	0.189	0.252	0.039	0.298	0.305	0.603
VSAT	-0.126	-0.214	-0.009	0.017	0.001	0.106	0.113	-0.050
NS1	0.104	0.058	-0.022	-0.002	0.074	0.006	-0.023	-0.068
NS2	-0.089	-0.173	0.035	0.069	0.099	0.222	0.212	0.075
DR1	0.046	-0.091	0.122	0.152	0.278	0.262	0.210	0.011
DR2	0.161	0.075	0.156	0.198	0.216	0.212	0.170	0.180
LCIP	0.228	0.250	0.135	0.098	0.298	-0.034	-0.091	0.049
LCIN	-0.063	-0.084	0.182	0.162	0.284	0.210	0.170	0.179
UNIT1	0.222	0.160	0.010	0.077	-0.123	0.031	0.090	0.012
UNIT2	0.239	0.168	0.059	0.135	-0.054	0.088	0.147	0.018
UNIT3	0.275	0.305	0.122	0.157	-0.020	0.027	0.122	0.094
UNIT4	0.311	0.288	0.104	0.169	-0.110	0.005	0.103	0.099
FINAL	0.403	0.325	0.068	0.145	-0.041	0.005	0.100	-0.053

FACTOR THEORY CORRELATION MATRIX FOR MALES

VARIATE	HPT2	VSAT	NS1	NS2	DR1	DR2	LCIP	LCIN
HSPC	-0.021	0.005	0.057	0.001	0.091	0.087	0.032	-0.010
HSCA	0.086	0.032	0.006	-0.027	0.130	0.139	-0.106	0.067
HSPS	0.096	0.002	0.010	-0.080	0.039	0.101	-0.068	0.088
QSAT	0.002	0.142	0.183	0.115	0.339	0.297	0.132	0.078
ALG	-0.027	0.169	0.222	0.142	0.347	0.287	0.173	0.025
TRIG	0.090	0.073	0.148	0.110	0.250	0.235	0.217	0.063
SMDP	-0.101	0.039	-0.148	-0.010	-0.054	-0.106	0.006	-0.161
SMDN	-0.024	-0.037	-0.045	0.018	0.060	0.038	0.171	-0.072
PUMP	-0.016	-0.049	0.192	-0.049	0.207	0.307	0.235	-0.072
PUMN	-0.014	-0.072	0.193	-0.049	0.222	0.318	0.285	-0.025
RQMA	-0.056	0.018	0.156	0.094	0.267	0.190	0.090	0.036
RQPS	0.011	0.096	0.080	-0.022	0.132	0.201	0.038	-0.044
AIKP	-0.031	-0.125	0.179	-0.077	0.104	0.190	0.284	-0.003
AIKN	-0.053	-0.116	0.191	-0.070	0.126	0.208	0.291	-0.009
CLMP	0.043	-0.080	0.178	0.002	0.184	0.244	0.240	0.033
CLMN	-0.079	-0.085	0.196	-0.036	0.178	0.223	0.300	0.007
EFMP	0.029	-0.126	0.104	-0.089	0.046	0.161	0.228	-0.063
EFMN	0.010	-0.214	0.058	-0.173	-0.091	0.075	0.250	-0.084
CR1	0.189	-0.009	-0.022	0.035	0.122	0.156	0.135	0.182
CR2	0.252	0.017	-0.002	0.069	0.152	0.198	0.098	0.162
PSVR	0.039	0.001	0.074	0.099	0.278	0.216	0.298	0.284
GEPT2	0.298	0.106	0.006	0.222	0.262	0.212	-0.034	0.210
CEPT3	0.305	0.113	-0.023	0.212	0.210	0.170	-0.091	0.170
HPT1	0.603	-0.050	-0.068	0.075	0.011	0.180	0.049	0.179
HPT2	0.423	0.006	-0.055	0.090	0.007	0.096	-0.047	0.123
VSAT	0.006	0.110	0.018	0.087	0.097	0.041	-0.056	0.008
NS1	-0.055	0.018	0.128	0.032	0.129	0.119	0.122	0.007
NS2	0.090	0.087	0.032	0.138	0.140	0.081	0.004	0.064
DR1	0.007	0.097	0.129	0.140	0.292	0.215	0.134	0.096
DR2	0.096	0.041	0.119	0.081	0.215	0.225	0.153	0.080
LCIP	-0.047	-0.056	0.122	0.004	0.134	0.153	0.347	0.048
LCIN	0.123	0.008	0.007	0.064	0.096	0.080	0.048	0.147
UNIT1	0.016	0.031	0.043	-0.022	0.057	0.087	-0.054	-0.037
UNIT2	0.019	0.057	0.082	-0.004	0.107	0.147	0.002	-0.036
UNIT3	0.060	-0.025	0.005	-0.067	-0.021	0.061	0.020	-0.017
UNIT4	0.057	0.022	0.024	-0.063	0.016	0.104	-0.003	-0.056
FINAL	-0.042	0.055	0.127	-0.018	0.150	0.189	0.103	-0.055

FACTOR THEORY CORRELATION MATRIX FOR MALES

VARIATE	UNIT1	UNIT2	UNIT3	UNIT4	FINAL
HSPC	0.139	0.133	0.085	0.130	0.200
HSCA	0.308	0.262	0.187	0.301	0.320
HSPS	0.273	0.259	0.265	0.342	0.339
QSAT	0.240	0.337	0.175	0.285	0.462
ALG	0.238	0.322	0.139	0.271	0.508
TRIG	0.165	0.198	0.138	0.208	0.384
SMDP	0.001	-0.036	-0.002	0.081	0.053
SMDN	0.005	-0.017	0.017	0.045	0.081
PUMP	0.284	0.372	0.234	0.353	0.475
PUMN	0.246	0.334	0.228	0.314	0.438
RQMA	0.153	0.133	0.000	0.021	0.203
RQPS	0.264	0.397	0.282	0.437	0.466
AIKP	0.207	0.225	0.252	0.254	0.415
AIKN	0.218	0.259	0.274	0.277	0.446
CLMP	0.176	0.211	0.170	0.178	0.320
CLMN	0.206	0.252	0.247	0.252	0.443
EFMP	0.222	0.239	0.275	0.311	0.403
EFMN	0.160	0.168	0.305	0.288	0.325
CR1	0.010	0.059	0.122	0.104	0.068
CR2	0.077	0.135	0.157	0.169	0.145
PSVR	-0.123	-0.054	-0.020	-0.110	-0.041
GEFT2	0.031	0.088	0.027	0.005	0.005
GEFT3	0.090	0.147	0.122	0.103	0.100
HPT1	0.012	0.018	0.094	0.099	-0.053
HPT2	0.016	0.019	0.060	0.057	-0.042
VSAT	0.031	0.057	-0.025	0.022	0.055
NS1	0.043	0.082	0.005	0.024	0.127
NS2	-0.022	-0.004	-0.067	-0.063	-0.018
DR1	0.057	0.107	-0.021	0.016	0.150
DR2	0.087	0.147	0.061	0.104	0.189
LCIP	-0.054	0.002	0.020	-0.003	0.103
LCIN	-0.037	-0.036	-0.017	-0.056	-0.055
UNIT1	0.220	0.232	0.166	0.253	0.290
UNIT2	0.232	0.292	0.198	0.303	0.359
UNIT3	0.166	0.198	0.233	0.279	0.270
UNIT4	0.253	0.303	0.279	0.393	0.397
FINAL	0.290	0.359	0.270	0.397	0.520

FACTOR-SCORING COEFFICIENTS FOR MALES

VARIATE	AE	PCP	PAMP	PUM	PAP	ALM	SA	FI/FD	FC
HSPC	0.068	-0.034	0.008	-0.015	-0.007	-0.004	0.000	0.000	0.018
HSCA	0.652	-0.330	0.075	-0.143	-0.070	-0.039	0.002	-0.003	0.170
HSPS	0.593	-0.300	0.068	-0.130	-0.064	-0.036	0.002	-0.003	0.155
QSAT	0.000	0.441	-0.018	-0.156	-0.001	-0.046	0.079	-0.085	-0.118
ALG	0.000	0.570	-0.024	-0.201	-0.002	-0.059	0.102	-0.110	-0.152
TRIG	0.000	0.417	-0.017	-0.147	-0.001	-0.043	0.075	-0.081	-0.111
SMDP	0.000	0.000	0.770	-0.097	0.006	-0.028	-0.146	0.030	0.055
SMDN	0.000	0.000	0.358	-0.045	0.003	-0.013	-0.068	0.014	0.026
PUMP	0.000	0.000	0.000	0.649	-0.060	-0.460	0.070	-0.078	0.116
PUMN	0.000	0.000	0.000	0.548	-0.051	-0.389	0.059	-0.066	0.098
RQMA	0.000	0.000	0.000	0.000	-0.818	-0.132	-0.044	-0.032	-0.034
RQPS	0.000	0.000	0.000	0.000	0.977	0.158	0.053	0.039	0.041
AIKP	0.000	0.000	0.000	0.000	0.000	0.295	-0.019	0.061	-0.015
AIKN	0.000	0.000	0.000	0.000	0.000	0.423	-0.027	0.087	-0.022
CLMP	0.000	0.000	0.000	0.000	0.000	-0.564	0.036	-0.116	0.029
CLMN	0.000	0.000	0.000	0.000	0.000	0.426	-0.027	0.088	-0.022
EFMP	0.000	0.000	0.000	0.000	0.000	0.165	-0.010	0.034	-0.008
EFMN	0.000	0.000	0.000	0.000	0.000	0.662	-0.042	0.136	-0.034
CR1	0.000	0.000	0.000	0.000	0.000	0.000	-0.366	-0.198	0.056
CR2	0.000	0.000	0.000	0.000	0.000	0.000	-0.104	-0.056	0.016
PSVR	0.000	0.000	0.000	0.000	0.000	0.000	-0.868	-0.469	0.134
GEFT2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.541	0.123
GEFT3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.807	0.184
HPT1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-1.278
HPT2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.247
VSAT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NS1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NS2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DR1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DR2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LCIP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LCIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
UNIT4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FINAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000